HATCHERY COHO SALMON *ONCORHYNCHUS KISUTCH* PRODUCTION, CONTRIBUTION TO THE COMMERCIAL FISHERIES, AND CATCH TIMING IN THE COMMERCIAL FISHERIES, WITH COMPARISONS TO WILD COHO SALMON STOCKS IN SOUTHEAST ALASKA, 1999

By
Audra Brase
and
Mark Stopha

Regional Information Report[1] 1J00-26

Alaska Department of Fish and Game
Division of Commercial Fisheries
Southeast Region
Juneau, Alaska

July 2000

[1] The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished divisional reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate timely reporting of recently collected information, reports in this series undergo only limited internal review and may contain preliminary data, this information my be subsequently finalized and published in the formal literature. Consequently, these reports should not be cited without prior approval of the author or the Commercial Fisheries Division.

AUTHORS

Audra Brase is the assistant salmon troll fishery management biologist for the Southeast Region of the Alaska Department of Fish and Game, Division of Commercial Fisheries, Box 240020, Douglas, Alaska 99824. E-mail: Audra_Brase@fishgame.state.ak.us.

Mark Stopha is the salmon troll fishery management biologist for the Southeast Region of the Alaska Department of Fish and Game, Division of Commercial Fisheries, Box 240020, Douglas, Alaska 99824. E-mail: Mark_Stopha@fishgame.state.ak.us.

ACKNOWLEDGEMENTS

Pattie Skannes and Scott Kelley provided an editorial review of this manuscript. Carol Denton provided hatchery release information and interpretation as well as an editorial review. Leon Shaul provided wild stock escapement survey data. Cori Cashen produced the final document.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

In 1980, the Joint Southeast Alaska Regional Planning Teams (JRPT) established a long-range harvest objective (year 2000) of 2.65 million coho salmon, which was 1.5 million fish more than the estimated wild stock production at the time (Joint Southeast Regional Planning Teams, 1981). The JRPT estimated that the regionwide hatchery production potential at the time was about 550,000 fish, which left a difference of approximately 1.1 million additional fish required through enhancement and rehabilitation. Nearly 20 years later, wild stock harvest had increased to 3.4 million fish (1995-1998 average) (Stopha, 2000), and hatchery production potential had increased to over 1.0 million fish (ADF&G files). Thus, the hatchery production potential and the harvest objectives of the original JRPT plan were met; in fact, the 1.1 million fish difference proposed in 1980 was met through wild stock production alone.

Annual reports have been produced for enhanced chinook salmon production in Southeast Alaska since 1982 (e.g., McGee et al., 1998). These reports serve as a single source of current information on enhanced chinook salmon production and harvest in Southeast Alaska. The following report on enhanced coho production in Southeast Alaska is intended to serve a similar function, by documenting the coho salmon releases by facility and location, returns, and contributions to the commercial catch by time and area. The catch timing of hatchery and wild stocks from the same area are compared, and spawning escapement of wild stocks during recent years of increased hatchery contribution are assessed. Information from this document is intended to provide a basis for examining future trends in hatchery production, contribution of hatchery-produced fish to the commercial fisheries, and impacts of hatchery production on wild stock production and fisheries management.

Management of Coho Salmon Harvests in Southeast Alaska

Coho salmon are managed inseason by the Alaska Department of Fish and Game (Department) to ensure adequate escapement of wild stocks. Allocation of coho salmon among fishing gear types (troll, purse seine, drift gillnet, set gillnet, and sport) is carried out through a management plan established by the Alaska Board of Fisheries. Inseason estimates are made of both hatchery and wild stock contributions for assessing regional run strength. If wild stock catch rates and escapement indices indicate a low coho salmon return, fishery managers may close any or all fisheries to provide increased passage of mature fish to spawning streams.

The salmon troll fishery may also be closed for up to 10 days in mid-August to maintain historical apportionment of the coho salmon harvest among gear groups. This closure may occur if the proportional share of coho salmon harvest by the salmon troll fishery is larger than that of inside gillnet and sport fishing fisheries compared to average 1971-1980 levels. The primary inside fisheries indicators for the assessment are overall coho salmon harvests and catch per unit effort in the District 101, 106, 111, and 115 drift gillnet fisheries and by anglers sport fishing from boats in the salt water sport fishery that return to any port connected to the Juneau road system.

The troll fishery is managed inseason with the use of a dockside sampling program that provides catch per unit of effort (CPUE) information by time and location. The CPUE data is pooled into six management areas (Figure 1), and the weekly catch rates from these areas are compared to long-term averages to assess run strength. Most of the troll catch occurs along the outer coast of Southeast Alaska (Areas 1, 2, and 3).

Net fisheries (purse seine, drift gillnet, and set gillnet) are managed by fishing district (Figure 2). Fisheries are generally opened weekly by emergency order, with fishing time based on run strength of targeted species. The purse seine fleet harvests coho salmon largely as bycatch to targeted species (pink

and chum salmon) in District 101, 102, 103, 104, 105, 106, 107, 109, 110, 112, 113, and 114. The drift gillnet fleet harvests coho salmon, both in directed fisheries and as bycatch to targeted species (sockeye, chum and pink salmon), primarily in District 101, 106, 108, 111, and 115. Set gillnet fisheries occur only in the Yakutat region, and harvest coho salmon in directed fisheries in the terminal areas of rivers; therefore, hatchery fish are rarely harvested because no hatcheries are located near these fishing grounds.

Coho Salmon Harvests in Southeast Alaska Fisheries 1999

Approximately 3.6 million coho salmon were harvested in Southeast Alaska in 1999 (Table 1). This was above the five-year (1994-1998) average of 2.9 million coho. The troll fleet harvested 2.3 million fish or 63% of the total coho salmon harvest in Southeast Alaska, followed by the purse seine fleet (422,900 fish; 12%), the drift gillnet fleet (394,100 fish; 11%), the sport fishery (330,000 fish; 9%) and the set gillnet fleet (187,100 fish; 5%).

Wild Coho Production in Southeast Alaska

Coho salmon occur in more than 2,000 streams in Southeast Alaska. Most coho producing streams are small, with the number of spawners typically ranging from several up to 1,000 fish. Because of the large number of these systems, they collectively contribute substantially to overall coho salmon production. Lake systems are also important to coho salmon production and typically produce returns between 1,000 and 8,000 fish. Large coho salmon populations occur in the Taku, Chilkat, Berners, Stikine, Unuk, and Chickamin Rivers and in some Yakutat area systems. Spawning takes place during the fall and early winter months. Most coho salmon rear in freshwater for one or two years, and virtually all spend no more than one winter in the ocean before returning to spawn as adults. The majority of harvested coho salmon are 3 and 4-year-old fish and are caught in the year of spawning.

Four wild coho salmon stocks have been marked annually with coded-wire tags (CWT) since the early 1980s to provide annual harvest rate estimates. These indicator stocks include Auke Lake near Juneau, the Berners River in lower Lynn Canal, Ford Arm Lake on the outer coast north of Sitka, and Hugh Smith Lake on the mainland southeast of Ketchikan. Fish are tagged in these systems and their contribution to the fisheries is estimated through the department's catch sampling and CWT processing programs. Wild stock CWT recovery information was obtained from the Alaska Department of Fish and Game (ADF&G), Commercial Fisheries Division, coded wire tag and otolith lab (tag lab). Recoveries of wild stock tags were expanded by week and district, but not by the tagged to untagged ratio.

Weirs are operated on the three lake systems to enumerate coho escapements and to estimate the fraction of the returning population marked with CWTs. Escapement to the Berners River is determined by intensive foot surveys. Coho salmon samples are collected with beach seines in order to estimate the fraction of the returning population marked with CWTs. Escapement estimates for the Berners River are conservative because a lower river weir is not employed to count all fish entering the system. This results in harvest rate estimates that are likely biased upward.

Wild Stock Escapements

Escapement indices of wild stocks to natal streams were compiled from the Integrated Fisheries Database at the Douglas Regional ADF&G office for stocks with established escapement goals (Clark and Clark, 1994; Clark, Clark, and Shaul, 1994; Clark, 1995). Catch and escapement information for the four wild CWT stocks (Hugh Smith Lake, Ford Arm Lake, Berners River, and Auke Lake) is from ADF&G (2000).

Only a small percentage of the coho salmon escapements in Southeast Alaska are enumerated or surveyed because of the extremely scattered distribution of stocks and difficult conditions for observation of spawners during the fall months. Variations in environmental conditions and run timing can cause problems in obtaining either ground and/or aerial survey escapement estimates that reflect actual spawner abundance. High water events appear to trigger upriver migration but also adversely affect stream visibility, making it difficult or impossible to accurately count fish. Once spawning occurs, stream life is typically very short and post-spawners are quickly removed by predators or flushed downstream by high water. Survey counts are usually higher when fall weather is dry and fish continue to accumulate in streams before spawning occurs. Low peak counts are often associated with seasons when numerous protracted freshets occur in October that bring fish to the spawning areas and then flush out the post-spawners, while at the same time severely limiting survey opportunities. Improved precision may be obtained by conducting multiple surveys throughout the fall. This is feasible for some systems such as those for the Juneau roadside streams, but is more difficult and expensive for remote streams such as the major coho salmon producing systems in southern Southeast Alaska.

Since 1982, trends in coho escapements of the four CWT indicator stocks generally fluctuated with total return (Figure 3). In 1999, all four coho indicator stocks came in above their upper escapement goal. Of the remaining 12 coho salmon systems with established escapement goal ranges, three of the systems were below, three met, and two systems were above the established escapement goal ranges. Poor weather and low visibility during the fall surveys caused four systems in Yakutat to have no recorded coho salmon escapement and contributed to the appearance that two other Yakutat systems were below escapement (Table 2).

Hatchery Coho Production in Southeast Alaska

Hatchery release and stock contribution information were obtained from the tag lab database. Hatchery release information was compiled for the 1995-1999 period. Recoveries of hatchery tags were expanded by week and district by the tag lab to yield estimates of enhanced stock contribution.

Hatcheries were grouped by geographic location based on their location within the six reporting areas used for the troll fishery dockside-sampling program (Figure 1), with one exception. The Chatham Strait area (District 109 and 112), which is part of both the Northern Inside and Central Inside areas for trolling, was treated as a separate hatchery geographic area due to the relative isolation of the facilities in this area (Hidden Falls (Kasnyku Bay), Deer Lake and Port Armstrong) from others in northern and central Southeast Alaska (Figure 4).

Fourteen hatcheries throughout Southeast Alaska produce coho salmon (Figure 4). Most of these hatcheries are operated as private non-profit (PNP) corporations funded through commercial fishery landing taxes. All Alaska hatchery stocks are tagged with CWTs for identification. In each of the past five years, 4% to 5% of the total hatchery stocks have been tagged (Table 3). In 1999, 12 of the 19 hatchery coho salmon release sites had tagging rates greater than 5% (Table 3); however, these fish accounted for only 21% of the total coho salmon released in Southeast Alaska.

Release Site Selection

Release sites have been selected for various reasons over the years. Some early projects were attempts to rehabilitate or enhance wild populations. Present day project plans are developed with three primary considerations. The first is determining if the disease histories of the stock to be introduced are compatible to the endemic stocks in the release area. The second consideration is straying of hatchery fish

into the wild stocks. Projects should be designed to maximize the imprint of the release site and minimize the potential of straying. The final consideration is the impact to wild fisheries management, and preventing the overharvest of wild stocks. Terminal harvest areas have been established at many enhanced coho release sites in order to provide an opportunity for 100% utilization of adult returns. Several enhancement projects have been associated with new fishpasses, where fry are planted in the habitat above a fishpass to accelerate colonization.

Broodstock Selection

Thirty-three wild coho stocks in the Southeast Alaska region have been used for enhancement programs (Table 4). Gametes are taken from wild stocks, usually for three to five years, during which time a "derivative" stock is developed with a discrete release site where broodstock can be taken in subsequent years. Exceptions have occurred where hatcheries were built on anadromous streams[2] (e.g. Klawock River Hatchery) and broodstock consists of wild fish as well as returns of enhanced production. Gametes from five sites outside of the region were imported in the 1970s, prior to the development of the department's genetics policy that now prohibits such stock moves. Four of these extra-regional stocks were incorporated into hatchery broodstock mixes and may still exert a minor genetic influence.

Age at Release

In this paper, age-0 releases are defined as all juveniles released into freshwater habitat during the year following egg take, up to February 15 of the subsequent year. Most age-0 groups are planted in a natural freshwater habitat in the spring, summer, and fall after emergence from incubators. In some cases, planting of fall release groups has been delayed until the following January or early February, because of ice cover on the recipient lake. These delayed releases are included in the age-0 category in Tables 3 and 4. Age-0 juveniles are exposed to a natural freshwater rearing environment for a minimum of 2 to 4 months before outmigration.

Numerous age-0 release strategies have been tried with varying degrees of success. Historically, most age-0s have been released directly into a lake or a stream, and most of these fish then migrate to saltwater as age-1 smolts, although some may remain in freshwater for two or three years before migrating to saltwater. Some recent age-0 releases have incorporated specific culture strategies, including free-ranging lake rearing (e.g. Tent Lake), net pen lake rearing (e.g. Neck Lake), and lake fertilization to increase natural feed (e.g. Deer Lake). Also, age-0 project goals vary from colonization above a new fishpass, to enhancement of an existing anadromous run, to enhanced production from above-barrier habitat in a non anadromous system.

Age-1 releases include all fish reared in a hatchery for approximately 1.5 years. Fish planted in freshwater after April 1 would be expected to begin downstream migration to saltwater, without a natural freshwater rearing period. The age-1 smolt release is the most common enhanced coho salmon rearing strategy in Southeast Alaska, accounting for an average of 65% of annual releases. Historically, juvenile coho salmon have been released into the freshwater environment in all months of the year, at various sizes and ages, up through age 3, although in the last five years, all Southeast Alaska coho salmon releases have been made up of age-0 or age-1 fish (Table 3).

[2] No new hatcheries on anadromous streams have been permitted since 1976 [AS 16.10.400(f)], and will not be allowed unless the stream is classified as "suitable for enhancement purposes" by the commissioner.

Hatchery Releases

Regionwide 1999 Summary

In 1999, 15.4 million coho salmon fry or smolts were released from the various Southeast Alaska hatcheries release sites. The top three hatchery coho salmon release sites for age-0 fish were Deer Lake with 2.5 million, Neck Lake with 1.6 million, and Tent Creek with 1.2 million coho salmon released. The top five hatchery coho salmon release sites for age-1 fish were the Neets Bay release site with 2.8 million, Tamgas Creek with 1.8 million, Kasnyku Bay with 1.7 million, Klawock River with 1.3 million, and Gastineau Channel with 784,000 coho salmon released (Tables 3 and 5). Hatchery releases of coho salmon increased from 340,000 juveniles in 1979 to over 17.1 million in 1996 (Figure 5). From 1996 - 1998 hatchery coho salmon production generally decreased, and may have been due to hatchery cut-backs, fewer eggs available and/or lower in-hatchery survivals (C. Denton, personal communication) More than 10.0 million juvenile coho salmon were released each year beginning in 1987.

Southern Inside Releases (District 101 and 102)

In 1999, the Southern Inside hatchery release sites released the largest numbers of coho salmon, with 41% of the Southeast Alaska total enhanced coho salmon coming from release sites in District 101 and 102. The majority of the releases came from release sites at Neets Bay, Tamgas Creek, and Tent Creek (Table 5).

Chatham Area Releases (District 109 and 112)

Much of the Chatham Strait coho salmon production in the 1980s consisted of small releases into non-anadromous lakes, and was less than 10% of total Southeast production at that time (Stopha, 2000). However, the Chatham Area was the second largest enhanced coho salmon producer in 1999, producing 31% of the total enhanced releases. The largest numbers of smolts came from the Deer Lake (53%) and Kasnyku Bay release sites (34%), with a smaller portion of fish coming from the Port Armstrong release site.

Central Inside Releases (District 105, 106, 107, and 108)

Most enhanced coho production in the Central Inside area has been accomplished through stream stocking projects in the mid-1980s and releases of smolts from the Crystal Lake hatchery (Stopha 2000). In 1999, the Central Inside Area was the third largest enhanced coho salmon producing area, with 14% of the total Southeast Alaska hatchery coho salmon releases occurring at Neck Lake, Earl West Cove, Burnett Inlet, Crystal Creek, and Duncan Creek.

Northern Inside Releases (District 110, 111, 114, and 115)

In 1999, coho salmon were released at two sites (Gastineau Channel and Sheep Creek) in the Northern Inside Area, producing 5% of the total Southeast Alaska hatchery coho salmon (Table 5). Since 1990, nearly all of the enhanced coho salmon in the Northern Inside area have come from the Gastineau Hatchery and have been released in the Juneau vicinity (Stopha, 2000).

Southern Outside (District 103) and Central Outside (District 113) Releases

The Klawock Hatchery[3] in the Southern Outside area, produced 9% of the total Southeast Alaska enhanced coho salmon in 1999. The two Central Outside release sites (Bear Cove and Crescent Bay) produced less than 1% of the total hatchery coho salmon releases. Outside area release sites have not been emphasized in the past because returning adults are accessible to a limited number of fisheries (Stopha, 2000).

Hatchery Contributions to 1999 Coho Salmon Harvest

Regional Summary

In 1980, Alaska hatchery contribution of coho salmon to commercial fisheries was less than 1% of the total harvest of coho salmon in the Southeast region (ADF&G, 1998). In 1999, the contribution had reached 23% (Table 1, Figure 6). Alaska hatchery contributions are more varied in the recreational fisheries. In the early 1990s, the hatchery contributions averaged 15%; since then, the percentages have increased to a contribution of over 25% (preliminary) in 1999 (Figure 7).

The Deer Lake release site was the largest enhanced coho salmon contributor to Southeast Alaska commercial fisheries in 1999, with over 177,000 fish harvested by all gear groups (Table 6). The Neets Bay release site contributed approximately 162,000 fish to the commercial fisheries, followed by Kasnyku Bay with 124,000 fish.

Small numbers of non-Alaska hatchery coho salmon from Canada, Washington, and Oregon are incidentally harvested. In the past five years, fish from these facilities have contributed less than 1% of the annual coho salmon harvest (Table 7).

Regional Hatchery Contributions, Harvest, and Return Timing by Gear

Drift Gillnet

In 1999, the District 106 drift gillnet fleet harvested the largest numbers of coho salmon (203,000 fish) of any gillnet fishery. The District 101 gillnetters took the largest percentage of hatchery coho salmon, with 55% of the harvest being of Alaska Hatchery origin (Table 8). The District 101 hatchery harvest came primarily from coho salmon from the release sites in the Southern Inside area, with Tamgas Creek and Neets Bay being the largest contributors. The District 111 drift gillnet fleet contributed the fewest number of coho salmon to the overall drift gillnet coho harvest, and the fewest number of hatchery coho salmon as well. The drift gillnet fleet harvested virtually no coho salmon from the stocks from the Southern/ Central Outside or Chatham Area release sites.

From 1995-1999, the Southern Inside hatchery release sites produced 78% of the Alaska hatchery contribution to the drift gillnet fleet, followed by the Central and Northern Inside areas (15% and 7%,

[3] The Klawock facility has had three different operators and three different names since 1993; in this report it is consistently called "Klawock Hatchery."

respectively, Table 9). Since 1995, the Southeast Alaska hatchery contribution to the drift gillnet catch has ranged from 25% to 34% (Table 9).

Hatchery contributions to the drift gillnet fishery were less than 15% from 1980 through 1989, and ranged from about 12% to 34% from 1995 through 1999 (Figure 8).

In 1999, coded-wire-tagged coho salmon were recovered in every week of the Southeast Alaska drift gillnet fishery (June 20 through October 23). The highest hatchery contributions came from the Neets Bay release site, with an estimated 43,700 Neets Bay coho salmon contributing to the District 106 gillnet harvest (Table 15). The smallest hatchery stock contributions came from the Taiya Inlet and Portage Creek release sites, with each of these stocks contributed ten or fewer coho salmon to the 1999 drift gillnet harvest (Table 6). Wild stock tagged coho salmon were recovered in all the Southeast Alaska drift gillnet fisheries, ranging from the Berners River, which contributed over 1,300 tagged fish (total recoveries, not expanded for time and area) to the District 111 and 115 fisheries and Dredge Lake contributing less than ten tagged coho salmon to the District 115 fishery (Table 15).

The Southern Outside and Central Outside release sites contributed fewer than five total coho salmon to the 1999 drift gillnet fisheries.

The Southern Inside release sites contributed the largest numbers of hatchery coho salmon to the Southeast Alaska drift gillnet fisheries, with over 101,000 fish harvested. The greatest numbers of came from the District 101 and 106 gillnet fleets. These fish peaked in the drift gillnet fisheries in Statistical Weeks 38 - 40 (mid-September to early October).

The Northern Inside release sites contributed approximately 5,500 coho salmon to the District 111 and 115 drift gillnet fisheries. These fish peaked in the catches in Statistical Week 36 (late August to early September) (Table 15).

The Chatham Area release sites contributed approximately 500 coho salmon to the District 106, 111, and 115 drift gillnet fisheries, with the majority of fish coming from District 111 and 115. Catches were distributed throughout the season, with no obvious peak in harvest.

The Central Inside release sites contributed over 25,000 coho salmon to the drift gillnet fisheries. The majority (80%) of these fish were harvested in the District 106 drift gillnet fisheries, and the remainder were harvested in the District 101 and 108 fisheries. Catches of the Central Inside Neck Lake coho salmon peaked in Statistical Week 28 (July 4 - 10), while catches of coho from Earl West Cove peaked in Statistical Week 38 (September 12- 18).

Purse Seine

In 1999 the largest coho harvests by the purse seine fleet occurred in District 109 and 112, with over 200,000 coho salmon harvested in each of these districts (Table 10). The greatest hatchery coho salmon percents also came from District 109 and 112, with the percentages being 17% and 13% respectively. The purse seine fleet harvested their largest proportion of hatchery coho salmon from the Chatham Area stocks by harvesting a relatively small proportion of coho salmon (10-12%) from the large returns to the Deer Lake and Kasnyku Bay release sites. The seine fleet harvested the lowest proportion of coho salmon from the stocks of the Southern/Central Outside and Central/ Northern Inside release sites.

From 1995-1999, the Chatham Area hatchery release sites produced 67% of the Alaska hatchery contribution to the purse seine fleet, followed by the Southern Inside hatcheries (28%, Table 9). Since

1995, the Southeast Alaska hatchery contribution to the purse seine fleet has ranged from 17% to 20% (Table 11).

Alaska hatchery contributions to the purse seine fishery were less than 15% from 1980 through 1990, and ranged from 13% to 22% from 1995-1999 (Figure 9).

Hatchery coho salmon were recovered in the purse seine fisheries from week 28 through week 36 (July 4 through August 28). Over 75,000 hatchery coho salmon contributed to the Southeast Alaska purse seine fisheries. The majority of these fish (75%) came from the Chatham Area releases at Deer Lake and Kasnyku Bay. These fish were primarily recovered in the District 109 and 112 purse seine fisheries. Very few tagged wild stock coho were recovered in the purse seine fisheries; the largest number (200 tagged fish, total recoveries, not expanded for time and area) came from Hugh Smith Lake and were recovered in the District 101, 102, 104, 106, and 109 fisheries. The smallest contributing wild stocks were Auke Creek, Duck Creek, and Ford Arm Lake with less than 20 tagged coho salmon being caught in the purse seine fisheries (Table 16).

The only Southern Outside release, from the Klawock Hatchery, contributed over 1,500 coho salmon to the 1999 purse seine fisheries. The majority of these fish were caught in mid-August in the District 103 and 104 fisheries.

The Southern Inside release sites contributed over 9,500 coho to the purse seine fisheries; the majority of these fish were from the Neets Bay release site. The greatest number of recoveries came from the District 104 and 109 purse seine fisheries. Harvests of these fish peaked in early to mid-August.

The Northern Inside release sites contributed approximately 3,600 coho salmon to the District 109, 112 and 114 purse seine fisheries. These fish peaked in the catches in Statistical Week 36 (August 29 - September 4).

The Chatham Area release sites contributed approximately 58,300 coho salmon to the District 104, 109, 110, 112, 113, and 114 purse seine fisheries, with the majority of fish caught in District 109 and 112. Hatchery coho salmon harvests in District 112 peaked in the end of July and District 109 hatchery harvests peaked in the beginning of August.

Central Outside release sites contributed fewer than 200 total coho salmon to the 1999 purse seine fisheries. The majority of these fish were of Bear Cove origin and were harvested in the District 113 purse seine fishery.

The Central Inside release sites contributed approximately 2,000 coho salmon to the purse seine fisheries. These fish were primarily of Burnett Inlet and Earl West Cove origin, and were harvested in the District 101, 102, 104, 106, 109, and 112 purse seine fisheries. Catches were scattered and there was no clear peak in the harvest.

Troll

During the 1995-1999 period, Alaska hatchery fish made up 21% of the total troll fleet harvest (Table 12). The troll fleet harvested their largest proportion of coho salmon from the Chatham Area and Southern Inside release site returns, harvesting 50% of the coho salmon from the large returns to the Deer Lake and Neets Bay release sites (Table 6). The trolling fleet harvested the fewest coho salmon from the Southern Outside returns.

From 1995-1999, the Chatham Area hatchery release sites produced 44% of the Alaska hatchery contribution to the troll fleet, followed by the Southern Inside hatcheries (42%, Table 12). In 1999, Deer Lake releases were the major contributor to the troll catch, followed by the Neets Bay and Kasnyku Bay release sites (Table 6). Since 1995, the Southeast Alaska hatchery contribution to the troll fleet has ranged from 19% to 23% (Table 12).

Hatchery contributions to the troll fishery were less than 15% from 1980 through 1990, and ranged from 14% to 23% from 1995-1999 (Figure 10).

The hatchery release site which contributed the most coho salmon to the 1999 Southeast troll fishery was Deer Lake with 145,000 coho salmon, followed by Neets Bay with 104,000 and Kasnyku Bay with 100,000 coho salmon. Southeast Alaska trollers harvested approximately 6,000 tagged coho salmon (total recoveries, not expanded for time and area) from the tagged wild stocks (Table 17). Over 1,500 of these fish came from the Berners River and were harvested by the trollers in District 114. The smallest wild stock contributions came from Duck Creek, with only 20 tagged coho salmon harvested by the Southeast Alaska trollers.

Approximately 9,600 coho salmon from the only Southern Outside release site (Klawock Hatchery) contributed primarily to the Southeast Alaska troll Areas 2 and 3 (Central and Southern Outside) with catches peaking in Statistical Weeks 29 - 31 (mid-to-late July) (Table 17).

The Southern Inside release areas were the second highest hatchery coho contributors to the 1999 Southeast Alaska troll fishery, with the majority of fish coming from the Neets Bay release site. Trollers fishing in District 113 (Area 2, Central Outside) in early to late August primarily caught these fish. Tamagas Creek and Herring Cove also contributed large numbers of coho salmon to the District 113 trollers.

The Northern Inside release sites contributed 39,000 coho salmon to the 1999 Southeast Alaska troll fisheries. The majority of these fish came from the Gastineau Channel release site (Table 6). Trollers fishing in District 113, 114, and 116 (Area 2, Area 4, and Area 1) harvested these fish. Catches peaked in the outer areas (113 and 116) in early August, and in late August through early September in the inner area of District 114.

The Chatham Area release sites (at Deer Lake and Kasnyku Bay) contributed the largest numbers of hatchery coho salmon to the trolling fleet. The Kasnyku catches followed the same pattern of peaking on the outer areas first (116 and 113) and then peaking in District 114 in late August through early September. Harvests of Deer Lake coho salmon followed a similar pattern; however, the District 114 harvest peaked at approximately the same time as the District 113 harvest.

The Central Outside release sites contributed the fewest coho salmon to the 1999 Southeast Alaska troll fisheries, with only 14,000 fish harvested primarily from the Shamrock Bay release site (Table 6). The majority of these fish were harvested by the District 113 (Area 2) trollers, and peaked in mid to late August.

The Central Inside Area contributed approximately 21,000 coho salmon to the troll fleet. Earl West Cove and Neck Lake were the largest contributors with 11,700 and 6,700 coho salmon harvested respectively (Table 6). These fish were harvested primarily by the District 113 troll fleet. The Neck Lake catches peaked in early July, and the Earl West Cove catches peaked in late August to early September.

DISCUSSION

During the 1990s, annual hatchery production of coho salmon reached an all-time high, with fishery contributions averaging about 20%. For the most part, wild stock escapements during this period of high hatchery production have met or exceeded goals. Catch timing of hatchery stocks tends to reflect the catch timing of wild stocks originating from the same area, particularly in fisheries in the outside areas, where most of the coho salmon harvest occurs.

Hatchery enhancement that increases commercial fisheries production obviously has the positive impact of adding more fish to the holds of commercial fishers, the creels of sport anglers, and the nets of personal use and subsistence fishers. However, hatchery production can also complicate fisheries management. The Alaska Department of Fish and Game is charged to both maintain sustained yield populations of wild stocks and provide harvest opportunity for hatchery stocks. The troll fishery, in particular, presents added challenges, since most of the harvest occurs over an extended period in highly mixed stock areas of the outer coast.

The objectives of the Comprehensive Plan developed in 1980 have been achieved in recent years, and would have been even in the absence of hatchery production. In the years following the plan's development, the Northern Southeast Regional Planning Team (NSERPT 1985), and Wilbur and Frohne (1989) all urged caution in expanding hatchery production to levels that could harm wild stocks. The RPT selected 25% as the most reasonable and acceptable maximum level for enhancement in the pink salmon seine fishery, which harvests mixed stocks of pink salmon prior to stock segregation, not unlike the troll coho fishery along the outer coast (NSERPT 1985).

Increased hatchery production and overall production goals should be assessed for possible risks to wild stocks and for possible impacts to commercial fishers from potential management actions taken to minimize impacts to wild stocks, particularly in light of the Comprehensive Salmon Plan goal of 2.65 having been achieved. Not only do fishers need to know the potential benefits of increased production to their catch, they also must be informed as to the management implications of significant increases in hatchery production and how such increases could change when and where they fish. This document is intended to serve as an annual assessment of the current status of coho production and the contribution of hatchery and wild indicator stocks to the commercial fisheries.

LITERATURE CITED

ADF&G. 2000. Commercial, personal use, and subsistence salmon fisheries Region I: Southeast Alaska Yakutat. Regional Information Report No. 1J99-50, Commercial Fisheries Division, Juneau.

Clark, J. E. and D. R. Bernard. 1987. A compound multivariate binomial-hypergeometric distribution describing coded microwire tag recovery from commercial salmon catches in Southeastern Alaska. Informational Leaflet No. 261. ADF&G, Juneau.

Clark, J. E., J. H. Clark and L. Shaul. 1994. Escapement goals for coho salmon stocks returning to Berners River, Auke Creek, Ford Arm Lake, and Hugh Smith Lake in Southeast Alaska. ADF&G, Regional Information Report No. 1J94-26, Douglas, Alaska.

Clark, J. H. and J. E. Clark. 1994. Escapement goals for the Yakutat area coho salmon stocks. ADF&G, Regional Information Report No. 1J94-14, Juneau.

Clark, J. H. 1995. Escapement goals for coho salmon stocks returning to streams located along the Juneau road system of Southeast Alaska. ADF&G, Regional Information Report No. 1J95-02, Juneau.

Joint Southeast Alaska Regional Planning Teams, 1981. Comprehensive Salmon Plan for Southeast Alaska, Phase I. ADF&G, Juneau.

McGee, S., C. Denton, B. Bachen, G. Freitag, M. Stopha, D. Gaudet, and F. Thrower. 1998. 1998 Annex. Chinook Salmon Plan for Southeast Alaska. Regional Information Report 1J98-24. ADF&G, Division of Commercial Fisheries, Juneau.

Northern Southeast Regional Planning Team (NSERPT). 1985. Revised comprehensive salmon plan, phase II: Northern Southeast Alaska. ADF&G, Juneau.

Stopha, M. 2000. Production, contribution and catch timing of hatchery coho salmon with comparisons to wild coho salmon in Southeast Alaska commercial fisheries. ADF&G. Regional Information Report 1J00-12, Juneau.

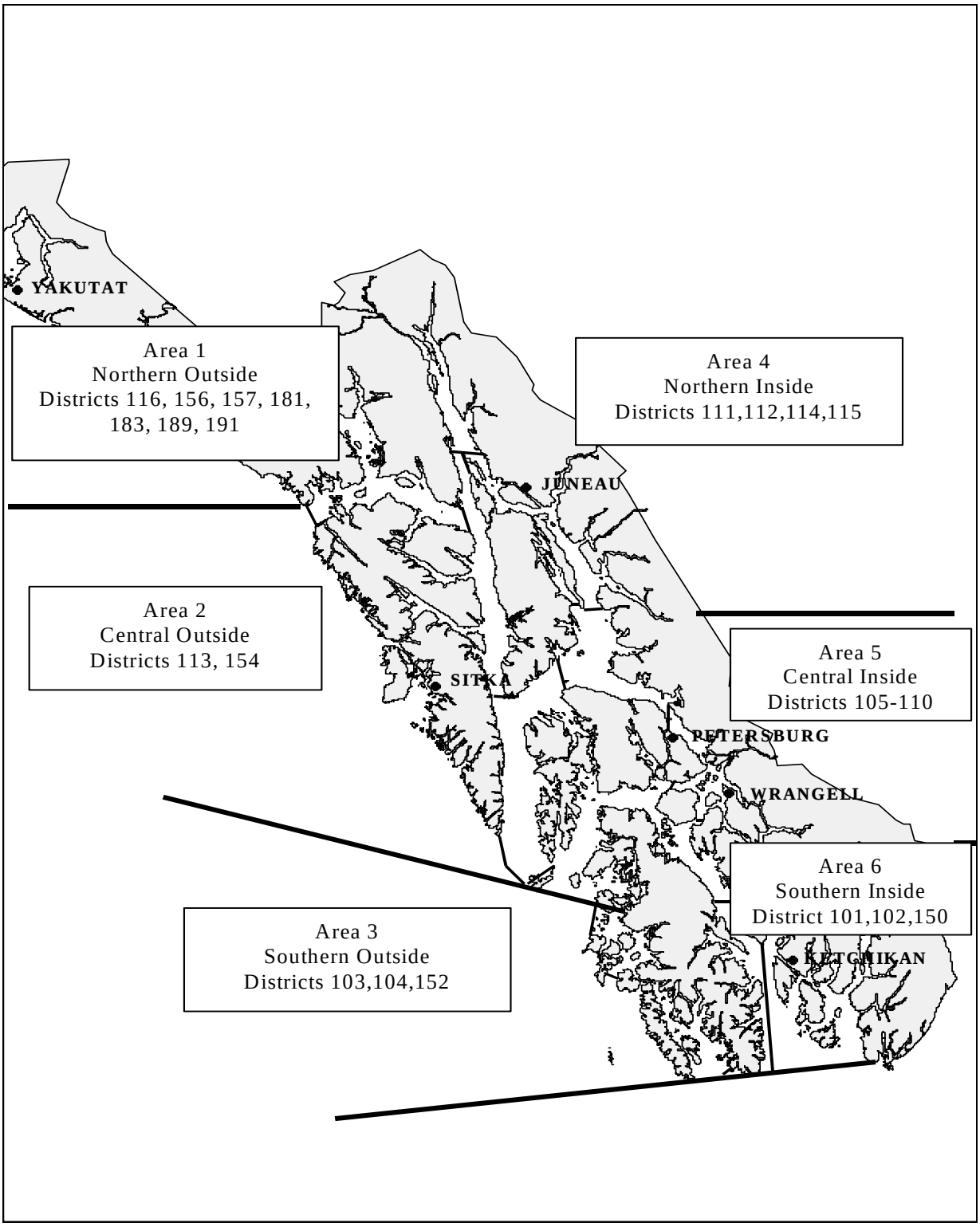

Figure 1. Southeast Alaska troll management areas.

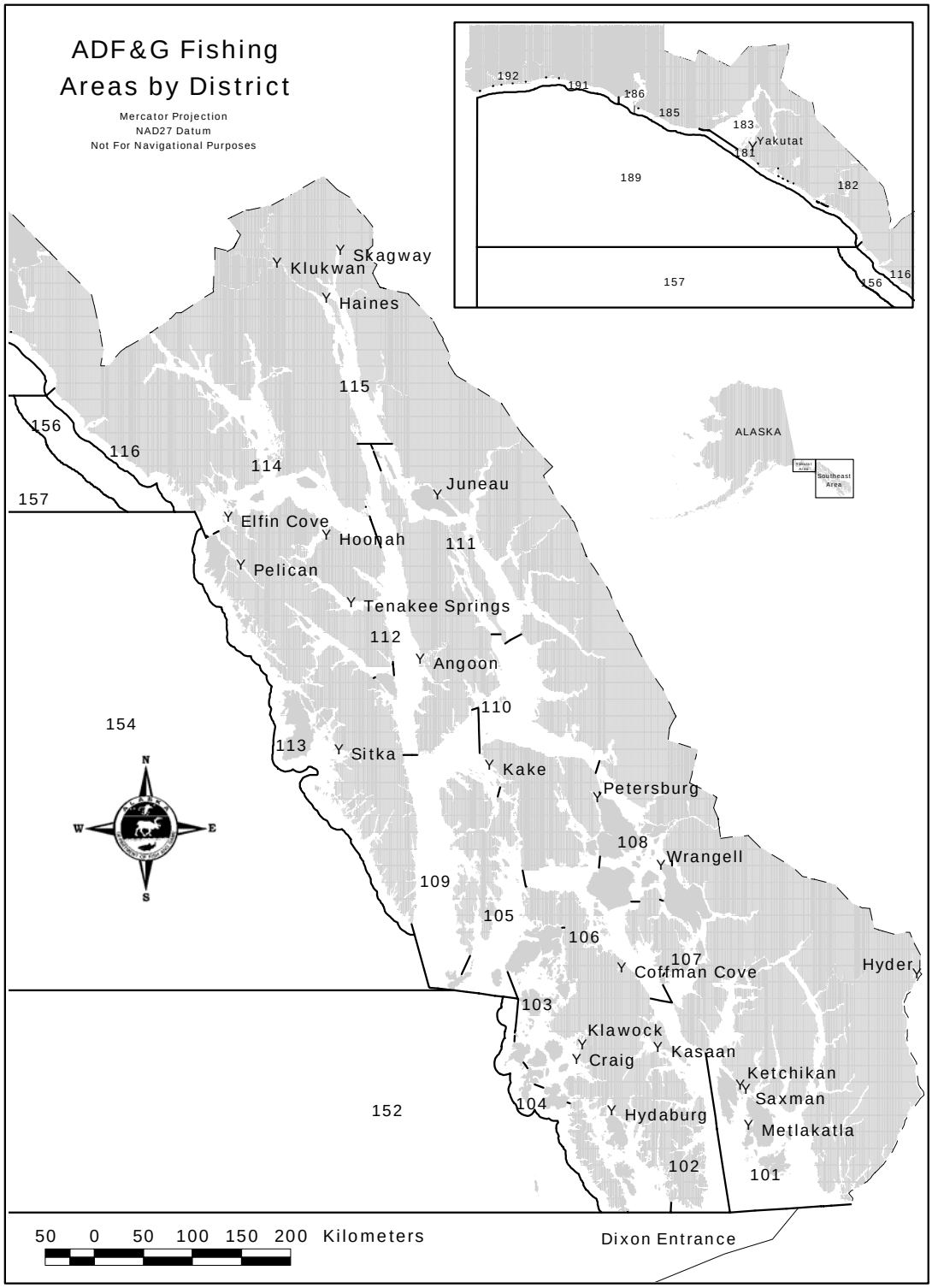

Figure 2. Commercial fishing districts in Southeast Alaska.

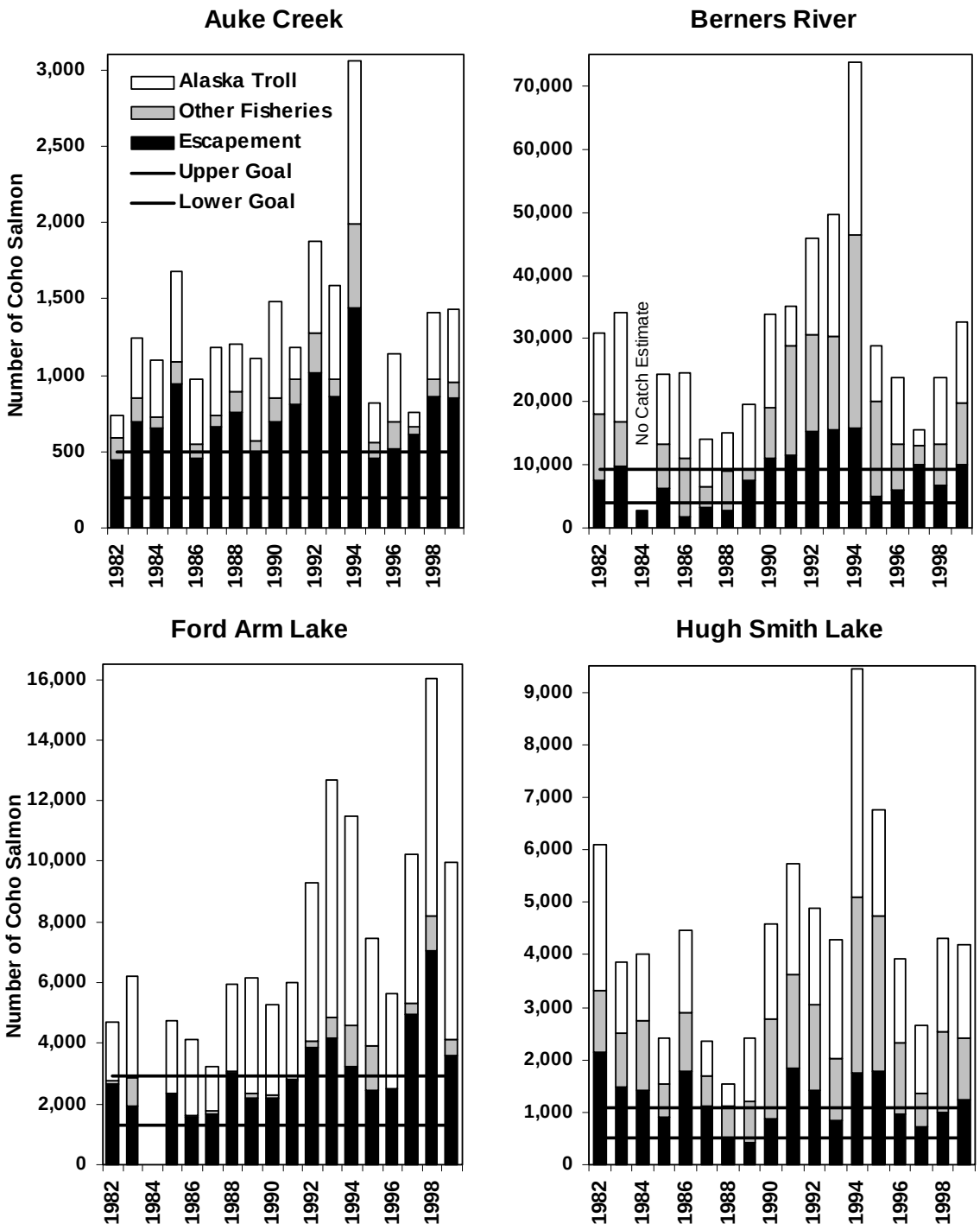

Figure 3. Total run size, catch, escapement, and escapement goal range for four wild Southeast Alaska coho salmon indicator stocks, 1982-1999.

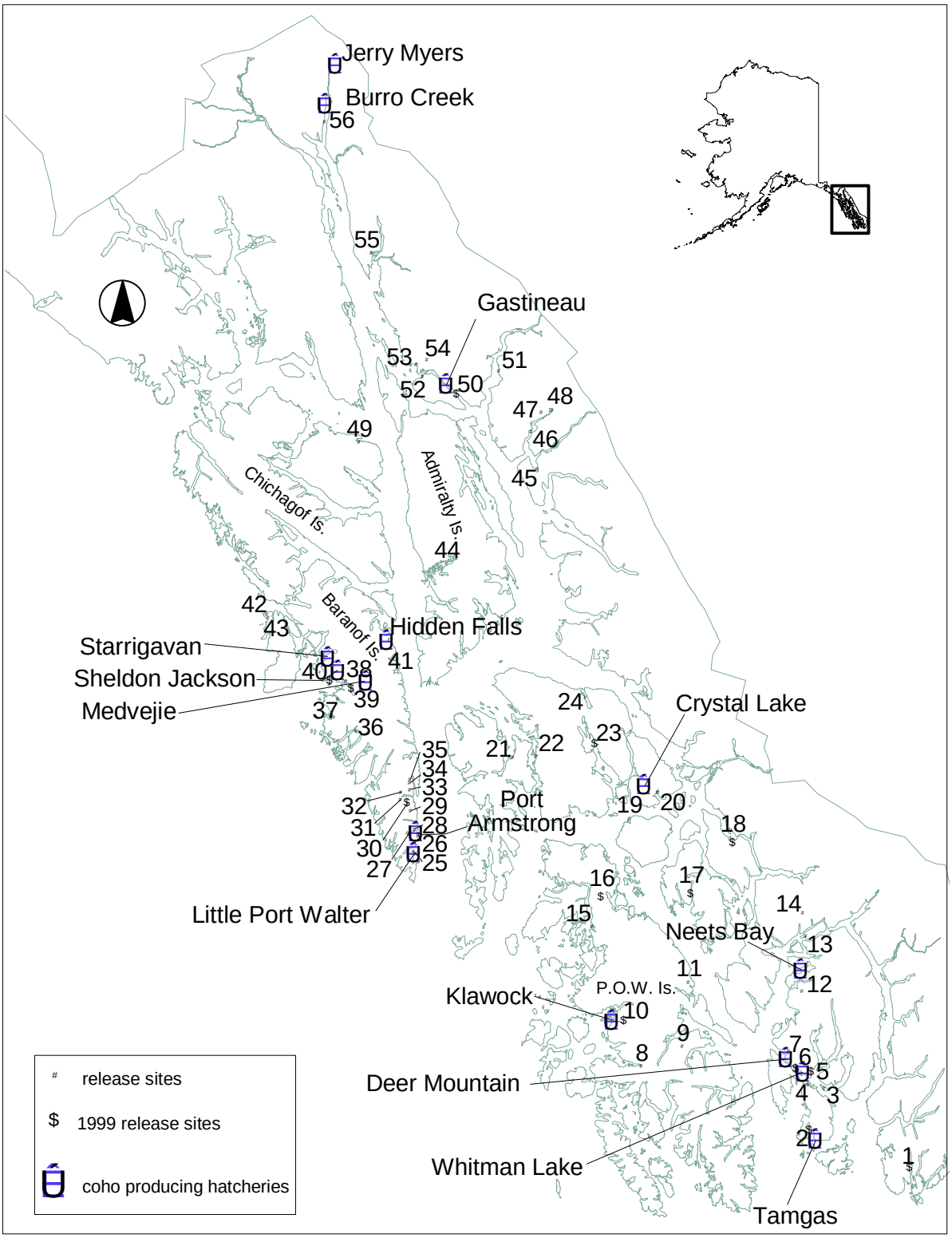

Figure 4. Location of hatcheries producing coho salmon (stars), and release sites of hatchery coho salmon (numbers) in Southeast Alaska. See release site key on following page.

Figure 4. Key.

Map Number	Release Site
1	Nakat Inlet
2	Tent Lake
3	Bold Island Lake
4	Annette Bay Creek
5	Herring Cove
6	Ketchikan Creek
7	Ward Lake
8	Cable Creek
9	Old Franks Lake
10	Klawock River & Creek
11	Rio Roberts Creek
12	Margaret Lake
13	Bell Island
14	Reflection Lake
15	Tunga Lake
16	Neck Lake
17	Burnett Inlet
18	Earl West Cove
19	St. John Creek
20	Ohmer Creek
21	Slippery Creek
22	Irish Creek
23	Duncan Creek
24	Portage Creek
25	Jetty Lake (Port Armstrong)
26	Toledo Harbor
27	Ludvik Lake
28	Ospery Lake
29	L Rostislaf Lake
30	Deer Lake
31	Cliff Lake
32	Fiddle Lake
33	Banner Lake
34	Finger Lake
35	Blanchard Lake
36	Shamrock Bay
37	Deep Inlet
38	Bear Cove
39	Sumner Creek
40	Crescent Bay
41	Kasnyku Bay
42	Sea Lion Cove Lake
43	Surprise Lake
44	Mitchell Creek
45	Suntaheen Creek
46	Speel Arm
47	First & Indian Lake
48	Sweetheart Lake
49	Elfendahl Lake
50	Sheep Creek
51	Davidson Creek
52	Fish Creek
53	Fritz Cove & Auke Creek
54	Dredge & Salmon Creek (Mendenhall River)
55	Berners River (wild)
56	Taiya Inlet

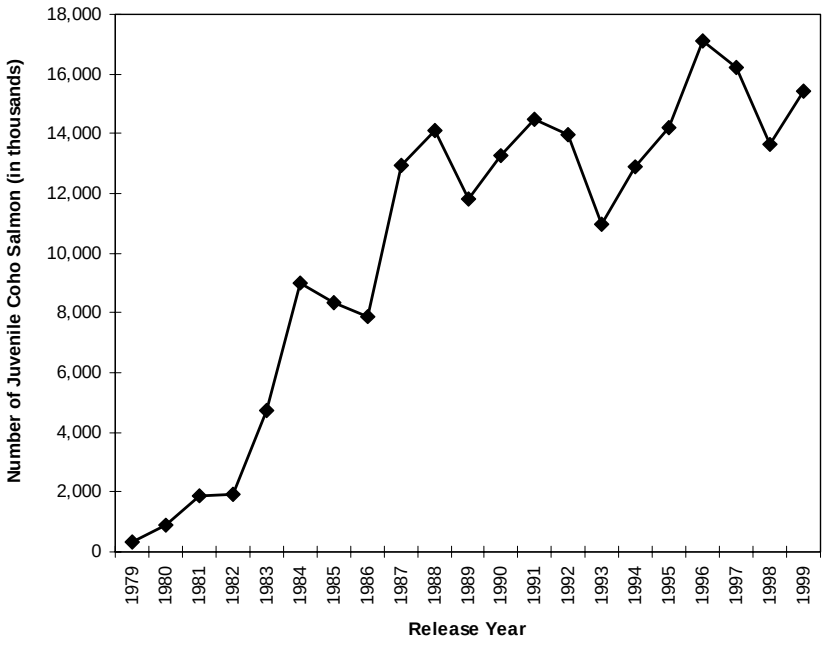

Figure 5. Number (in thousands) of juvenile coho salmon released from Southeast Alaska hatcheries, 1979-1999.

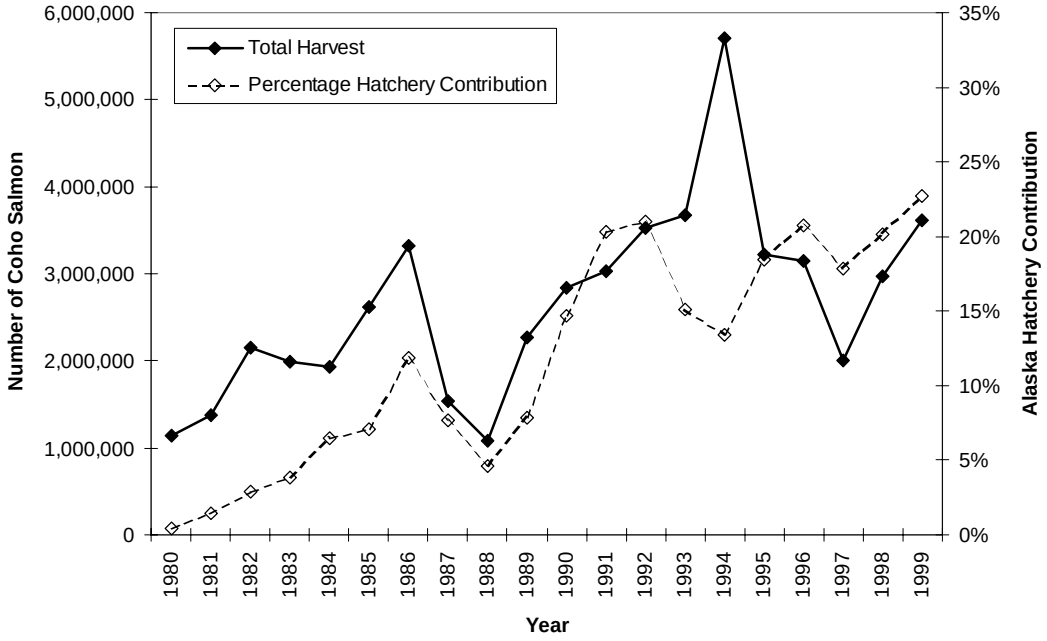

Figure 6. Total coho salmon harvest in the drift gillnet, purse seine, troll and sport fisheries combined, and the overall Alaska hatchery percentage of the catch, 1980-1999.

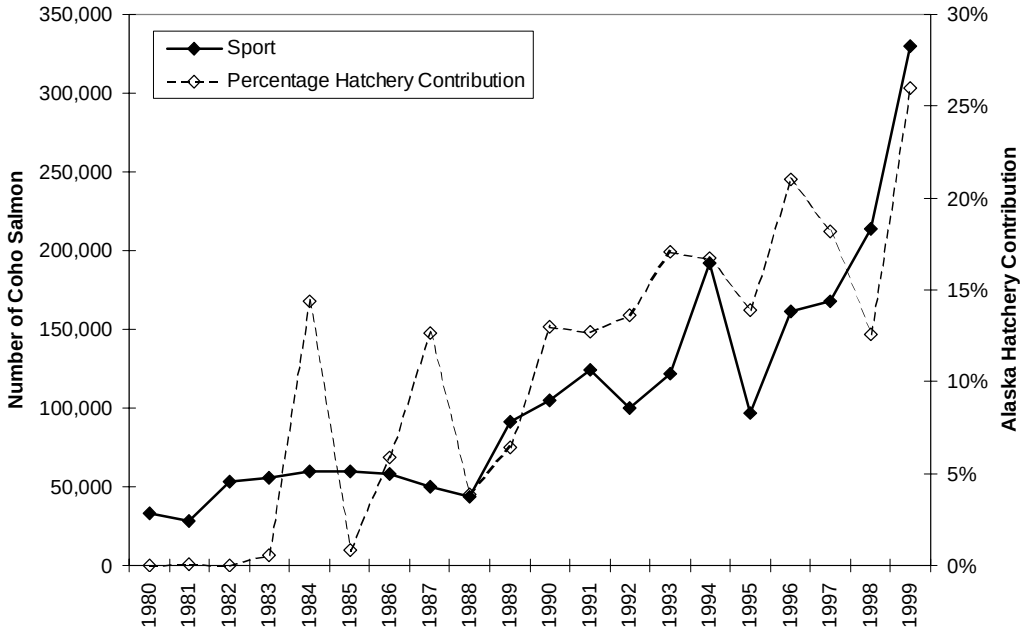

Figure 7. Total coho salmon harvest in the SE AK sport fishery and the Alaska hatchery percentage of the catch, 1980-1999. Harvest data from 1999 is considered preliminary.

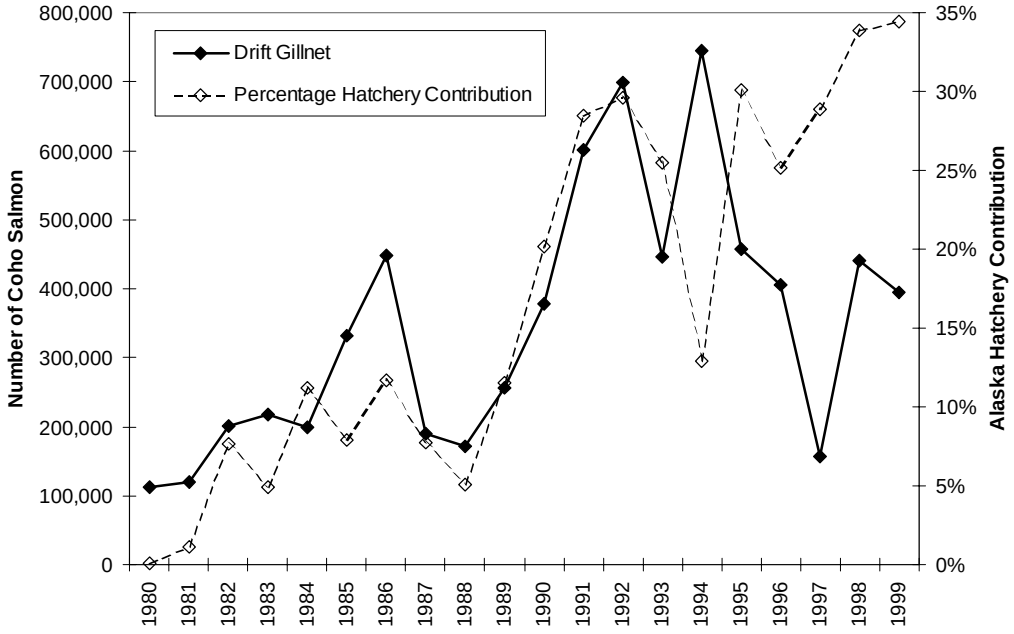

Figure 8. Total coho salmon harvest in the drift gillnet fishery and the Alaska hatchery percentage of the catch, 1980-1999.

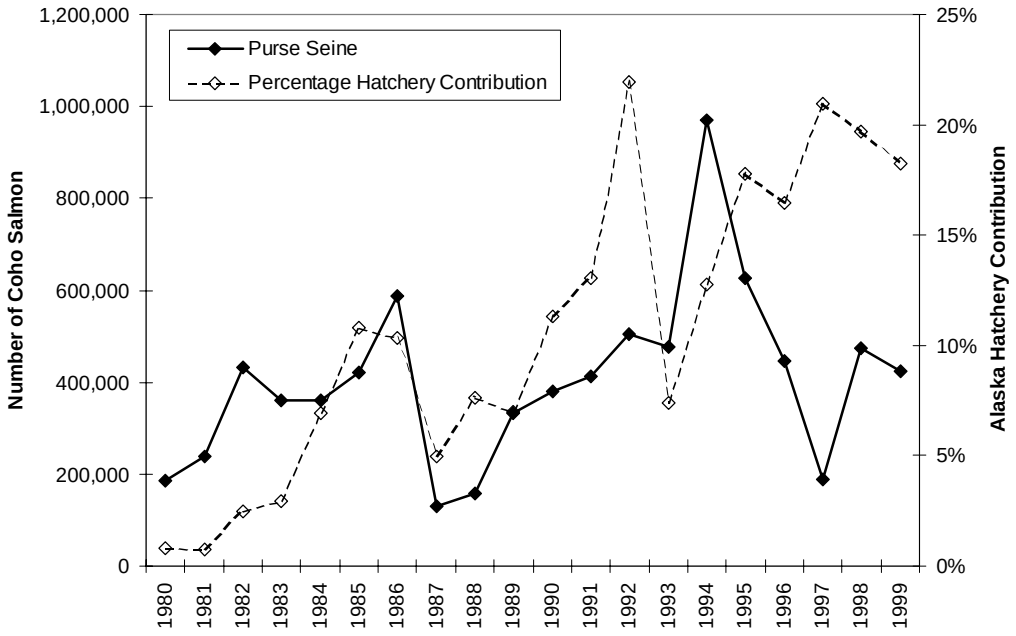

Figure 9. Total coho salmon harvest in the purse seine fishery and the Alaska hatchery percentage of the catch, 1980-1999.

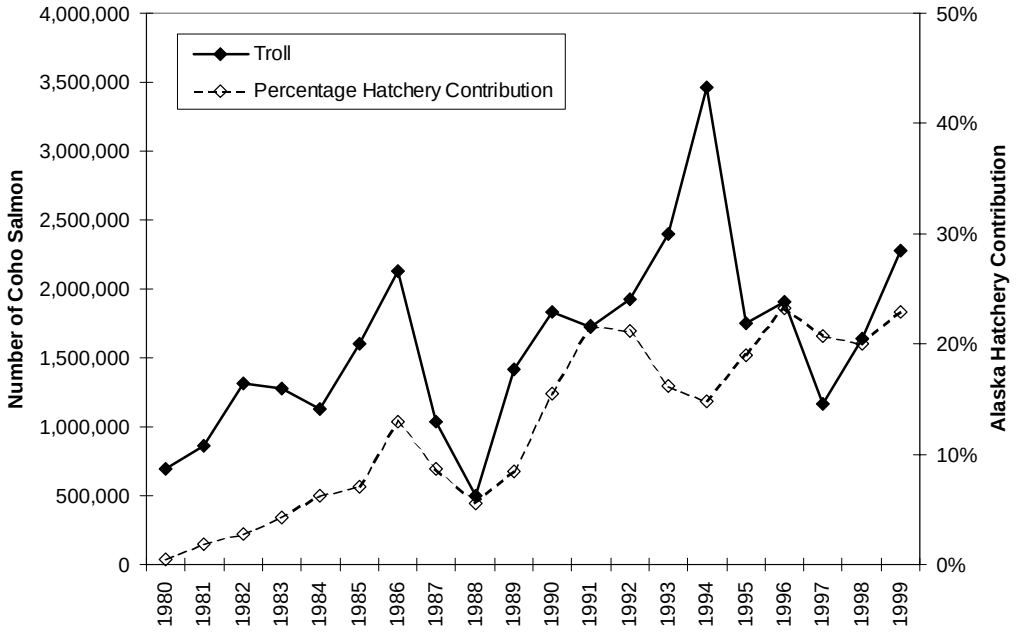

Figure 10. Total coho salmon harvest in the troll fishery and the Alaska hatchery percentage of the catch, 1980-1999.

Table 1. Annual Southeast Alaska coho harvest from traditional, hatchery terminal harvest areas, experimental areas, and Annette Island commercial fisheries, recreational fisheries and the Alaska hatchery contribution to the total harvest, 1960-1998. Sport catch estimates were available beginning in 1977. The 1999 sport catch and hatchery contribution estimates are preliminary.

	Total Harvest						Alaska Hatchery Harvest					
Year	Troll	Purse Seine	Drift Gillnet	Set Gillnet	Sport	Total	Troll	Purse Seine	Drift Gillnet	Sport	Total Hatchery Contribution	Percentage Hatchery Contribution
1960	396,211	125,871	37,986	119,149		679,217						
1961	399,932	246,524	52,743	128,670		827,869						
1962	643,740	239,382	98,404	170,776		1,152,302						
1963	693,050	316,491	112,776	141,365		1,263,682						
1964	730,766	506,505	172,411	169,780		1,579,462						
1965	695,887	557,005	166,452	122,207		1,541,551						
1966	528,621	452,057	155,922	66,252		1,202,852						
1967	443,677	188,965	134,029	97,211		863,882						
1968	779,500	463,553	202,965	92,005		1,538,023						
1969	388,443	109,956	65,053	32,555		596,007						
1970	267,647	294,574	163,901	30,279		756,401						
1971	391,279	326,264	159,143	37,734		914,420						
1972	791,941	390,343	275,393	46,289		1,503,966						
1973	540,125	129,593	124,349	41,776		835,843						
1974	845,109	166,687	186,583	77,556		1,275,935						
1975	214,170	70,201	102,321	37,403		424,095						
1976	524,762	87,604	156,469	51,743		820,578						
1977	506,845	160,519	183,702	92,214	36,152	979,432						
1978	1,100,902	245,074	223,321	139,500	48,508	1,757,305						
1979	918,845	176,593	83,050	95,873	23,112	1,297,473						
1980	697,181	185,479	112,081	119,684	32,808	1,147,233	3,025	1,545	100	6	4,676	0%
1981	860,898	238,502	119,595	132,579	28,158	1,379,732	16,400	1,829	1,345	20	19,594	1%
1982	1,316,013	431,804	201,337	148,854	53,436	2,151,444	36,565	10,741	15,411	14	62,731	3%
1983	1,276,363	360,287	218,219	81,541	55,403	1,991,813	54,030	10,683	10,794	299	75,806	4%
1984	1,132,637	361,325	199,211	182,256	59,812	1,935,241	70,285	25,063	22,367	8,588	126,303	7%
1985	1,600,294	421,771	332,313	202,783	59,910	2,617,071	112,736	45,515	26,234	485	184,970	7%
1986	2,128,033	588,718	448,723	92,097	58,322	3,315,893	275,527	60,844	52,310	3,432	392,113	12%
1987	1,041,051	131,178	189,301	124,407	50,284	1,536,221	89,992	6,516	14,601	6,374	117,484	8%
1988	500,227	158,434	170,946	205,926	43,688	1,079,221	27,609	12,093	8,740	1,681	50,124	5%
1989	1,415,517	333,116	255,689	176,773	90,789	2,271,884	120,248	23,302	29,426	5,866	178,841	8%
1990	1,832,583	379,334	377,870	148,821	105,212	2,843,820	284,868	42,917	76,041	13,663	417,490	15%
1991	1,719,082	411,854	601,179	166,731	123,946	3,022,792	372,665	53,853	171,027	15,763	613,308	20%
1992	1,929,126	505,135	699,448	290,095	99,939	3,523,743	408,313	110,699	206,991	13,600	739,603	21%
1993	2,395,518	477,006	445,880	237,387	121,874	3,677,665	386,910	35,288	113,496	20,802	556,495	15%
1994	3,461,665	970,098	744,558	343,843	191,860	5,712,024	511,476	123,644	95,919	32,088	763,126	13%
1995	1,750,219	627,472	456,840	295,029	97,128	3,226,688	332,498	111,761	137,529	13,526	595,313	18%
1996	1,906,682	447,003	404,609	227,752	161,615	3,147,661	442,651	73,449	101,902	33,993	651,995	21%
1997	1,170,349	189,054	156,725	322,776	167,641	2,006,545	242,940	39,609	45,278	30,488	358,314	18%
1998	1,636,479	475,171	441,458	197,629	213,435	2,964,172	328,257	93,597	149,398	26,877	598,128	20%
1999	2,275,455	422,926	394,131	187,055	330,000	3,609,567	521,263	77,237	135,737	85,800	820,037	23%
Averages												
1960-1969	569,983	320,631	119,874	113,997	NA	1,124,485						
1970-1979	610,163	204,745	165,823	65,037	35,924	1,056,545						
1980-1989	1,196,821	321,061	224,742	146,690	53,261	1,942,575	80,642	19,813	18,133	2,676	121,264	5%
1990-1999	2,007,716	490,505	472,270	241,712	161,265	3,373,468	383,184	76,205	123,332	28,660	611,381	18%
1995-1999	1,747,837	432,325	370,753	246,048	193,964	2,990,927	373,522	79,131	113,969	38,137	604,758	19%

Table 2. Escapement estimates of coho salmon to escapement indicator streams in Southeast Alaska and Yakutat rivers, 1980-1999.

	Southeast Indicator Stocks				Juneau Roadside					Yakutat Area						
Year	Auke Creek	Berners River	Ford Arm Lake	Hugh Smith Lake	Jordan Creek	Montana Creek	Petersen Creek	Steep Creek	Switzer Creek	Akwe River	East/Doame River	Italio River	Kaliakh River	Lost River[a]	Situk River	Tsiu/Tsivat River
1980	698	-	-	-	-	-	-	-	-	5,000	2,000	3,000	3,000	4,400	8,100	18,000
1981	647	-	-	-	-	-	-	515	-	5,000	7,200	5,500	5,000	9,120	8,430	20,000
1982	447	7,505	2,662	2,144	-	545	320	232	80	3,000	3,200	5,000	8,000	7,100	9,180	40,000
1983	694	9,840	1,944	1,490	184	636	219	171	80	6,000	3,000	2,000	6,000	6,380	5,300	16,500
1984	651	-	-	1,408	250	581	189	168	123	2,800	8,000	3,600	4,000	6,500	14,000	30,000
1985	942	6,169	2,324	903	72	810	276	186	122	2,400	13,000	5,300	53,500	1,500	6,490	52,000
1986	454	1,752	1,546	1,783	163	60	363	250	54	5,900	2,200	2,700	5,200	3,300	3,162	14,100
1987	668	3,260	1,694	1,118	251	314	204	128	48	-	1,300	3,500	-	5,000	2,000	8,500
1988	756	2,724	3,028	513	215	164	542	155	51	-	5,500	3,500	2,500	1,600	11,000	16,000
1989	502	7,509	2,177	433	133	566	242	222	78	-	2,000	4,200	1,000	2,190	5,000	38,000
1990	697	11,050	2,190	870	216	1,711	324	185	82	-	2,800	5,700	3,450	9,460	1,630	16,800
1991	808	11,530	2,761	1,826	322	1,415	410	267	227	-	1,900	5,000	600	1,175	-	16,600
1992	1,020	15,300	3,847	1,426	785	2,512	403	612	93	-	3,700	5,550	4,900	4,235	13,820	26,300
1993	859	15,670	4,202	830	322	1,352	112	471	94	-	9,500	8,050	-	5,436	10,700	17,500
1994	1,437	15,920	3,151	1,679	371	1,829	318	200	198	3,300	9,200	3,700	5,800	6,000	21,960	51,000
1995	460	4,945	2,417	1,781	77	600	280	409	42	900	5,400	9,400	7,325	3,576	18,000	30,000
1996	515	6,050	2,500	950	54	798	263	134	42	-	12,000	2,700	220	4,030	6,252	22,000
1997	609	10,050	4,965	732	21	1,018	186	172	67	900	1,500	6,450	-	3,904	9,780	22,000
1998	862	6,802	7,049	983	63	1,160	102	149	42	-	-	500	-	1,534	1,840	12,000
1999	845	9,920	3,598	1,246	47	1,000	272	392	51	-	-	-	-	485	5,310	2,600
Averages:																
1980-1989	646	5,537	2,196	1,224	181	460	294	225	80	4,300	4,740	3,830	9,800	4,709	7,266	25,310
1990-1999	811	10,724	3,668	1,232	228	1,340	267	299	94	1,700	5,750	5,228	3,716	3,984	9,921	21,680
1980-1999	729	8,588	3,062	1,229	209	948	279	264	87	3,520	5,189	4,492	7,366	4,346	8,524	23,495
Escapement Goal Ranges:	200-500	4,000-9,200	1,300 - 2,900	500 - 1,100	100-350	75-200	200-500	100-300	25-75	1,800-5,000	2,500-8,500	1,400-6,500	4,000-14,000	2,200-6,500	3,300-9,800	10,000-29,000

[a] Combination of peak counts from Coast Guard L., Lost R., Ophir Creek, and Tawah Creek.

Table 3. Releases and percentages tagged of hatchery coho salmon by age-class and Southeast Alaska Release Site, 1995-1999.

	age-class	1995 released	% tagged	1996 released	% tagged	1997 released	% tagged	1998 released	% tagged	1999 released	% tagged
Southern Outside Hatchery Release Site											
KLAWOCK R 103-60	Age 1	354,252	6%	1,324,309	3%	-	-	622,143	9%	1,330,102	6%
Southern Inside Hatchery Release Sites											
KETCHIKAN CR 101-47	Age 1	66,484	29%	61,276	36%	69,057	33%	75,229	28%	63,298	32%
HERRING COVE 101-45	Age 1	301,660	7%	282,526	8%	544,456	8%	300,186	7%	305,024	7%
MARX CR 101-15	Age 0	699	98%	-	-	-	-	-	-	-	-
NAKAT INLET 101-11	Age 1	198,898	11%	203,500	10%	206,774	10%	198,970	9%	200,546	11%
NEETS BAY 101-90	Age 1	2,672,460	2%	2,993,832	5%	3,393,850	4%	2,413,770	5%	2,751,430	4%
TENT CR 101-25	Age 0	1,900,000	3%	2,142,000	3%	1,991,000	2%	1,328,996	3%	1,150,000	1%
WARD LK 101-47	Age 0	63,015	91%	73,701	92%	75,210	31%	63,525	48%	-	-
TAMGAS CR	Age 1	2,022,450	3%	2,076,092	3%	1,697,123	4%	1,526,499	3%	1,758,893	2%
OLD FRANKS LKS 102-60	Age 0	78,719	28%	143,416	31%	-	-	-	-	-	-
OLD FRANKS+KLAWOCK R	Age 0	149,449	13%	-	-	-	-	-	-	-	-
Northern Inside Hatchery Release Sites											
PORTAGE CR 110-16	Age 0	34,495	24%	34,651	25%	-	-	-	-	-	-
SHEEP CR 111-40	Age 1	621,235	11%	518,625	11%	575,554	10%	-	-	54,251	90%
GASTINEAU CH 111-40	Age 1	422,482	10%	347,512	10%	425,899	9%	823,659	10%	783,622	10%
TAIYA INLET 115-34	Age 1	-	-	17,688	78%	46,555	20%	-	-	-	-
Chatham Area Hatchery Release Sites									-		
DEER LK 109-10	Age 0	2,505,000	1%	2,714,500	1%	2,829,000	1%	2,525,000	1%	2,530,000	1%
PORT ARMSTRONG 109-10	Age 1	641,806	5%	1,384,769	3%	952,000	3%	123,850	7%	625,363	4%
KASNYKU BAY 112-11	Age 1	1,458,657	3%	1,554,122	3%	1,501,428	4%	1,489,644	4%	1,657,809	3%
Central Outside Hatchery Release Sites											
BEAR COVE 113-41	Age 1	4,990	92%	4,860	99%	6,900	76%	7,039	99%	7,045	100%
CRESCENT BAY 113-41	Age 1	70,398	16%	46,565	22%	74,509	13%	28,034	34%	16,840	99%
DEEP INLET 113-41	Age 1	41,896	25%	-	-	-	-	-	-	-	-
SHAMROCK BAY 113-32	Age 1	170,297	18%	230,511	17%	226,300	20%	238,024	17%	-	-
WRINKLENECK CR 113-41	Age 0	2,170	97%	2,184	99%	2,013	98%	-	-	-	-
Central Inside Hatchery Release Sites											
BURNETT INLET 106-22	Age 1	-	-	-	-	-	-	164,120	11%	178,961	11%
CRYSTAL CR 106-44	Age 0	-	-	-		-	-	110,046	27%	-	-
CRYSTAL CR 106-44	Age 1	174,434	12%	105,728	19%	91,023	22%	93,130	-	92,432	36%
DUNCAN CR 106-43	Age 0	-	-	-	-	-	-	-	-	12,718	65%
MITCHELL CR 106-43	Age 0	34,209	79%	25,867	98%	-	-	-	-	-	-
NECK LK 106-30	Age 0	-	-	609,233	7%	1,295,935	4%	1,323,859	2%	1,638,239	2%
EARL WEST COVE 107-40	Age 1	201,988	11%	205,514	10%	227,737	9%	196,434	10%	225,236	10%
Subtotal Age 0 Releases		4,767,756		5,745,552		6,193,158		5,351,426		5,330,957	
Subtotal Age 1 Releases		9,424,387		11,357,429		10,039,165		8,300,731		10,050,852	
Total All Southeast Alaska Coho Releases		14,192,143		17,102,981		16,232,323		13,652,157		15,381,809	
	Total Percent Tagged		5%		5%		4%		5%		4%

Table 4. Ancestral stocks and release sites of southeast Alaska hatchery coho salmon.

ANCESTRAL STOCK					RELEASE SITE					
Name	**District**	**Sub-Dist.**	**Stream**	**Site**	**Name**	**District**	**Sub-Dist.**	**Stream**	**Site**	**Comment**
Southern Inside Area										
NADZAHEEN CR	101	41	10670		TAMGAS CR	101	26	Annette Isl.		hatchery
KETCHIKAN CR	101	47	10250		KETCHIKAN CR	101	47	10250		hatchery
					WARD LK	101	47	10150	0010	
					TAMGAS CR	101	26	Annette Isl.		hatchery
INDIAN CR	101	71	10410	2025	HERRING COVE	101	40			THA[1]
					NEETS BAY	101	95			THA
					NAKAT INLET	101	10			THA
REFLECTION LK	101	80	10840		REFLECTION LK	101	80	10840	0010	
					KETCHIKAN CR	101	47	10250		hatchery
					WARD LK	101	47	10150	0010	
					MARGARET LK	101	90	10390	0010	fishpass
					BELL ISLAND	101	80	10990		THA
					HERRING COVE	101	40			hatchery
					BURNETT INLET	106	25			hatchery
					NECK LK	106	30	10750		THA
SALMON LK	102	60	10870	0020	OLD FRANKS LKS	102	60	10440	0010	fishpass
RIO ROBERTS	102	70	10580	2031	RIO ROBERTS	102	70	10580	2031	fishpass
THORNE R	102	70	10580		RIO ROBERTS	102	70	10580	2031	fishpass
Southern Outside Area										
KLAWOCK R	103	60	10470		KLAWOCK R	103	60	10470		hatchery
					KLAWOCK LK	103	60	10470	0010	hatchery
					TUNGA LK	103	90	10090	0010	fishpass
CABLE CR	103	60	10770	2004	CABLE CR	103	60	10770	2004	fishpass
Central Inside Area										
BIG CR	106	30	10800		BURNETT INLET	106	25			hatchery
ST JOHN CR	106	42	10030		ST JOHN CR	106	42	10030		fishpass
MITCHELL CR	106	43	10800		MITCHELL CR	106	43	10800		fishpass
DUNCAN SALT CHUCK	106	43			CRYSTAL CR	106	44	10310		hatchery
BLIND SLOUGH	106	44			CRYSTAL CR	106	44	10310		hatchery
					OHMER CR	108	40	10500		

-continued-

Table 4. (page 2 of 4)

ANCESTRAL STOCK					RELEASE SITE					
Name	**District**	**Sub-Dist.**	**Stream**	**Site**	**Name**	**District**	**Sub-Dist.**	**Stream**	**Site**	**Comment**
Chatham Strait Area										
SASHIN CR	109	10	10060		L PORT WALTER	109	10			hatchery
					KASNYKU BAY	112	22			THA
					LUDVIK LK	109	10			barriered[2]
					TOLEDO HARBOR	109	10			barriered
					BANNER LK	109	10	10240		barriered
					BLANCHARD LK	109	10	10260		barriered
					FINGER LK	109	10	10250		barriered
					FIDDLE LK	109	10			barriered
					L ROSTISLAF LK	109	10			barriered
					JETTY CR	109	11			THA
					PORT ARMSTRONG	109	11			hatchery
DEEP COVE	109	10			KASNYKU BAY	112	22			THA
					DEER LK	109	13			THA
					BANNER LK	109	10	10240		barriered
					BLANCHARD LK	109	10	10260		barriered
SLIPPERY CR	109	43	10030		SLIPPERY CR	109	43	10030		fishpass
Northern Inside Area										
PORTAGE CR	110	16	10020		PORTAGE CR	110	16	10020		fishpass
KING SALMON R	111	17	10100		SPEEL ARM	111	33			hatchery
FISH CR	111	32	10560		DAVIDSON CR	111	32	10780		fishpass
SPEEL LK	111	33	10340	0010	SPEEL ARM	111	33			hatchery
					INDIAN LK	111	33	10300		
					FIRST LK	111	33	10300	2014	
					SWEETHEART LK	111	35	10200		barriered
					SALMON CR	111	40	10150		
					SHEEP CR	111	40	10280		hatchery
					DREDGE LK	111	50	10500	0010	fishpass
					FISH CR	111	50	10690		
AUKE CR	111	50	10420		AUKE LK	111	50	10420	0010	hatchery
					SALMON CR	111	40	10150		
MONTANA CR	111	50	10520	2003	TAIYA INLET	115	34	10230		
					BURRO CR	115	35			hatchery
					DREDGE LK	111	50	10500	0010	fishpass
					SALMON CR	111	40	10150		
					SHEEP CR	111	40	10280		hatchery
					SPEEL ARM	111	33			
STEEP CR	111	50	10560	2006	AUKE LK	111	50	10420	0010	hatchery
					GASTINEAU CH	111	43			THA
					SHEEP CR	111	40	10280		hatchery
PAVLOV R	112	50	10010		SHEEP CR	111	40	10280		hatchery

-continued-

Table 4. (page 3 of 4)

ANCESTRAL STOCK					RELEASE SITE					
Name	**District**	**Sub-Dist.**	**Stream**	**Site**	**Name**	**District**	**Sub-Dist.**	**Stream**	**Site**	**Comment**
GAME CR	114	31	10131		SUNTAHEEN CR	114	27	10150		fishpass
BERNERS R	115	20	10100		SALMON CR	111	40	10150		
TAIYA R	115	34	10230		BURRO CR	115	35			THA
PULLEN CR	115	34	10310		TAIYA INLET	115	34	10230		
Central Outside Area										
INDIAN R	113	41	10190		INDIAN R	113	41	10190		
					SHAMROCK BAY	113	32			THA
					CRESCENT BAY	113	36			hatchery
					DEEP INLET	113	38			THA
					WRINKLENECK CR	113	41			barriered
					BEAR COVE	113	41			THA
					SITKA SOUND	113	41			
SEALION COVE N	113	61	10050		SEALION CV LK	113	61	10050		barriered
					SURPRISE LK	113	62	10100		barriered
SEALION CV S END	113	61	10060		SEALION CV LK	113	61	10050		barriered
FALLS CR	113	91	10140		ELFENDAHL LK	113	91			barriered
Hatchery Blends										
TC MIX (TAMGAS CREEK)										
KETCHIKAN CR	101	47	10250		TAMGAS CR	101	26	Annette Isl.		hatchery
NADZAHEEN CR	101	41	10670		TENT LK	101	26	Annette Isl.		barriered
INDIAN CR	101	71	10410	2025	ANNETTE BAY CR	101	41	Annette Isl.		
COLUMBIA R #2 (WA)					DAVIS CR	101		Annette Isl.		
STARRIGAVIN MIX										
LK ROSE TEAD					STARRIGAVAN BAY	113	41			
SASHIN CR	109	10	10060							
BLIND SLOUGH	106	44								
MENDENHALL R	111	50	10570							
CLH MIX (CRYSTAL LAKE)										
GREEN R (WA)					CRYSTAL CR	106	44	10310		hatchery
BLIND SLOUGH	106	44			PETERSBURG AREA	106				
DUNCAN SALT CHUCK	106	43			SUMNER CR	106	?			
BEAR CR (SEWARD)	231	30	10080	2010	IRISH CR	105	32	10120		fishpass

-continued-

Table 4. (page 4 of 4)

ANCESTRAL STOCK					RELEASE SITE					
Name	**District**	**Sub-Dist.**	**Stream**	**Site**	**Name**	**District**	**Sub-Dist.**	**Stream**	**Site**	**Comment**
SHIP CR	247	50	10060		ST JOHN CR	106	42	10030		fishpass
MENDENHALL R	111	50	10570		MITCHELL CR	106	43	10800		fishpass
					OHMER CR	108	40	10500		fishpass
					SLIPPERY CR	109	43	10030		fishpass
BURRO CR MIX										
TAIYA R	115	34	10230		TAIYA INLET	115	34	10230		
PULLEN CR	115	34	10310							
MONTANA CR	111	50	10520	2003						
SHEEP CR	11	40	10280							

[a] THA = Terminal Harvest Area.

[b] barriered = returning adults will be unable to access spawning habitat.

Table 5. 1999 Hatchery coho salmon releases from Southeast Alaska Hatcheries by release site (district-subdistrict) and life stage.

	Age 0	Age 1	Total	Percent of Total
Southern Outside Hatchery Release Site				
KLAWOCK R (103-60)	-	1,330,102	1,330,102	9%
Southern Inside Hatchery Release Sites				
NAKAT INLET (101-11)	-	200,546	200,546	1%
HERRING COVE (101-45)	-	305,024	305,024	2%
KETCHIKAN CR (101-47)	-	63,298	63,298	0%
NEETS BAY (101-90)	-	2,751,430	2,751,430	18%
TAMGAS CR	-	1,758,893	1,758,893	11%
TENT CR (101-25)	1,150,000	-	1,150,000	7%
Southern Inside Hatchery Subtotal	1,150,000	5,079,191	6,229,191	40%
Northern Inside Hatchery Release Sites				
GASTINEAU CH (111-40)	-	783,622	783,622	5%
SHEEP CR (111-40)	-	54,251	54,251	0.35%
Northern Inside Hatchery Subtotal	-	837,873	837,873	5%
Chatham Area Hatchery Release Sites				
PORT ARMSTRONG (109-10)	-	625,363	625,363	4%
DEER LK (109-10)	2,530,000	-	2,530,000	16%
KASNYKU BAY (112-11)	-	1,657,809	1,657,809	11%
Chatham Area Hatchery Subtotal	2,530,000	2,283,172	4,813,172	31%
Central Outside Hatchery Release Sites				
BEAR COVE (113-41)	-	7,045	7,045	0.05%
CRESCENT BAY (113-41)	-	16,840	16,840	0.11%
Central Outside Hatchery Subtotal	-	23,885	23,885	0.16%
Central Inside Hatchery Release Sites				
BURNETT INLET (106-22)	-	178,961	178,961	1%
NECK LK (106-30)	1,638,239	-	1,638,239	11%
DUNCAN CR (106-43)	12,718	-	12,718	0.08%
CRYSTAL CR (106-44)	-	92,432	92,432	1%
EARL WEST COVE (107-40)	-	225,236	225,236	1%
Central Inside Hatchery Subtotal	1,650,957	496,629	2,147,586	14%
Grand Total	5,330,957	10,050,852	15,381,809	

Table 6. Southeast Alaska Hatchery coho salmon contributions to the drift gillnet, purse seine and troll fisheries by area and release site (district-subdistrict), 1999. Note: subtotals and totals may not sum up exactly due to decimal rounding.

Hatchery Release Site	Drift Gillnet	Purse Seine	Troll	Total
Southern Outside				
KLAWOCK R (103-60)	-	1,543	9,585	11,128
Southern Inside				
NAKAT INLET (101-11)	5,668	512	8,433	14,613
TENT CR (101-25)	1,181	365	2,298	3,844
HERRING COVE (101-45)	8,230	492	16,784	25,507
KETCHIKAN CR (101-47)	1,313	974	1,221	3,508
WARD LK (101-47)	1,097	337	971	2,405
NEETS BAY (101-90)	52,006	5,618	104,410	162,035
OLD FRANKS LKS (102-60)	34	-	35	70
TAMGAS CR	31,522	1,263	27,609	60,393
Southern Inside Subtotal	101,051	9,563	161,761	272,375
Northern Inside				
PORTAGE CR (110-16)	8	203	321	533
GASTINEAU CH (111-40)	5,459	3,407	38,800	47,666
TAIYA INLET (115-34)	10	-	59	69
Northern Inside Subtotal	5,477	3,610	39,180	48,267
Chatham Area				
DEER LK (109-10)	181	32,102	145,220	177,503
PORT ARMSTRONG (109-10)	-	2,119	10,061	12,180
KASNYKU BAY (112-11)	327	24,105	99,862	124,294
Chatham Area Subtotal	508	58,326	255,143	313,977
Central Outside				
SHAMROCK BAY (113-32)	-	30	12,712	12,742
CRESCENT BAY (113-41)	-	-	751	751
WRINKLENECK CR (113-41)	-	-	88	88
BEAR COVE (113-41)	1	129	688	818
Central Outside Subtotal	1	159	14,239	14,399
Central Inside				
BURNETT INLET (106-22)	4,488	504	1,081	6,072
NECK LK (106-30)	15,669	374	6,667	22,710
CRYSTAL CR (106-44)	704	295	1,331	2,330
EARL WEST COVE (107-40)	4,208	809	11,686	16,703
Central Inside Subtotal	25,069	1,982	20,764	47,815
SE Alaska Hatchery Total	132,107	75,183	500,671	707,961

Table 7. Contribution of Southeast Alaska hatcheries, other Alaska hatcheries, and non-Alaska hatcheries to the troll, drift gillnet, and purse seine commercial fisheries, 1995-1999.

Region		YEAR 1995	1996	1997	1998	1999	1995-1999 Average	% of Southeast Alaska hatchery contribution
SOUTHEAST ALASKA HATCHERIES								
Southern Outside Release Sites (District 103)		838	11,793	2,812	107	11,128	5,336	1%
Southern Inside Release Sites (District 101 and 102)		294,153	313,902	175,137	269,246	272,375	264,962	47%
Northern Inside Release Sites (District 110, 111, 114 and 115)		31,937	36,440	8,997	35,069	48,267	32,142	6%
Chatham Area Release Sites (District 109 and 112)		211,812	235,037	131,609	182,976	313,977	215,083	38%
Central Outside Release Sites (District 113)		23,593	11,872	1,982	15,892	14,399	13,548	2%
Central Inside Release Sites (District 105, 106, 107 and 108)		8,681	11,179	9,567	61,851	47,815	27,819	5%
	Southeast Alaska Hatchery Total:	571,014	620,224	330,105	565,142	707,961	558,889	
OTHER ALASKA HATCHERIES								
	Non-Southeast Alaska Hatchery Total:	1,252	23	161	63	37	307	
NON-ALASKA HATCHERIES								
British Columbia		8,719	11,147	3,213	8,140	16,707	9,585	
Oregon		-	-	-	46	-	46	
Washington		1,945	1,988	100	1,408	496	1,188	
Hatchery Totals:	**Non-Alaska Hatchery Total:**	10,664	13,134	3,313	9,594	17,203	10,782	
	Alaska Hatchery Total:	572,266	620,246	330,266	565,205	707,998	559,196	
	Grand Total-All Hatcheries:	582,930	633,381	333,579	574,799	725,201	569,978	
	SE AK Commercial Catch (troll, purse seine, set/drift gillnet):	3,129,560	2,986,048	1,838,923	2,750,737	3,279,567	2,796,967	
	SE AK Wild Commercial Catch (troll, purse seine, set/drift gillnet):	2,546,630	2,352,667	1,505,344	2,175,938	2,554,366	2,226,989	
Hatchery Contribution:	**Alaska Hatchery**	18%	21%	18%	21%	22%		
	Non-Alaska Hatchery:	<1%	<1%	<1%	<1%	<1%		
	All Hatcheries:	19%	21%	18%	21%	22%		

Table 8. Southeast Alaska hatchery coho salmon contribution, by district and region of release site, to the Southeast Alaska drift gillnet fisheries, 1999.

	DISTRICT											
	101		106		108		111		115		All Districts	
RELEASE SITE	hatchery contrib	% of total coho gillnet harvest	hatchery contrib	% of total coho gillnet harvest	hatchery contrib	% of total coho gillnet harvest	hatchery contrib	% of total coho gillnet harvest	hatchery contrib	% of total coho gillnet harvest	hatchery contrib	% of total coho gillnet harvest
Southern Inside Release Sites												
HERRING COVE 101-45	3,502	5%	4,088	2%	640	2%	-	-	-	-	8,230	2%
KETCHIKAN CR 101-47	544	1%	724	0.4%	45	0.2%	-	-	-	-	1,313	0.3%
NEETS BAY 101-90	7,410	11%	43,701	22%	894	3%	-	-	-	-	52,006	13%
NAKAT INLET 101-11	4,244	7%	1,424	1%	-	-	-	-	-	-	5,668	1%
TENT CR 101-25	647	1%	534	0.3%	-	-	-	-	-	-	1,181	0.3%
WARD LK 101-47	254	0.4%	804	0.4%	39	0.1%	-	-	-	-	1,097	0.3%
TAMGAS CR	18,969	29%	12,552	6%	-	-	-	-	-	-	31,522	8%
OLD FRANKS LKS 102-60	-	-	34	0.02%	-	-	-	-	-	-	34	0.01%
Northern Inside Release Sites												
PORTAGE CR 110-16	-	-	-	-	-	-	8	0.05%	-	-	8	0.002%
GASTINEAU CH 111-40	-	-	-	-	-	-	955	6%	4,504	13%	5,459	1%
TAIYA INLET 115-34	-	-	-	-	-	-	-	-	10	0.03%	10	0.003%
Chatham Area Release Sites												
DEER LK 109-10	-	-	99	0.05%	-	-	82	0.5%	-	-	181	0.0%
KASNYKU BAY 112-11	-	-	-	-	-	-	237	1%	90	0.3%	327	0.1%
Central Outside Release Site												
BEAR COVE 113-41	-	-	-	-	-	-	-	-	-	-	0	0%
Central Inside Release Sites												
BURNETT INLET 106-22	18	-	3,179	2%	1,291	5%	-	-	-	-	4,488	1%
CRYSTAL CR 106-44	-	-	174	0.1%	508	2%	22	0.1%	-	-	704	0.2%
MITCHELL CR 106-43	-	-	58	0.03%	-	-	2	0.01%	-	-	60	0.02%
NECK LK 106-30	-	-	13,208	6%	2,461	9%	-	-	-	-	15,669	4%
EARL WEST COV 107-40	179	0.3%	3,489	2%	540	2%	-	-	-	-	4,208	1%
Total hatchery contribution	35,767	55%	84,069	41%	6,419	22%	1,307	8%	4,604	13%	132,166	34%
Total drift gillnet coho salmon harvest	107,196		203,262		28,654		17,215		35,350		391,677	

Table 9. Southeast Alaska hatchery contribution, by region of release site, to the Southeast Alaska drift gillnet fisheries, 1995-1999.

Region of Release Site	YEAR					1995-1999 Average	% of Southeast Alaska hatchery contribution
	1995	1996	1997	1998	1999		
Southern Inside Release Sites (District 101 and 102)	111,571	87,283	41,992	92,055	101,051	86,790	78%
Northern Inside Release Sites (District 110, 111, 114 and 115)	17,257	10,342	565	6,022	5,477	7,933	7%
Chatham Area Release Sites (District 109 and 112)	137	158	58	1,149	508	402	<1%
Central Outside Release Sites (District 113)	1,511	52	-	25	1	397	<1%
Central Inside Release Sites (District 105, 106, 107 and 108)	2,339	2,720	2,061	49,042	25,069	16,246	15%
Total Hatchery Contribution to Catch:	132,815	100,555	44,676	148,294	132,106	111,689	
Drift Gillnet Total Coho Harvest:	456,840	404,609	156,725	441,458	394,131	370,753	
Hatchery Contribution to Catch:	29%	25%	29%	34%	34%	30%	

Table 10. Southeast Alaska hatchery coho salmon contribution, by district and region of release site, to the Southeast Alaska purse seine fisheries, 1999.

	DISTRICT													
	101		102		103		104		105		106		107	
RELEASE SITE	hatchery contribution	% of total coho seine harvest	hatchery contribution	% of total coho seine harvest	hatchery contribution	% of total coho seine harvest	hatchery contribution	% of total coho seine harvest	hatchery contribution	% of total coho seine harvest	hatchery contribution	% of total coho seine harvest	hatchery contribution	% of total coho seine harvest
Southern Outside Release Site														
KLAWOCK R 103-60	-	-	164	0.4%	425	2%	883	1%	-	-	-	-	-	-
Southern Inside Release Sites														
HERRING COVE 101-45	53	0.1%	179	0.4%	-	-	121	0.2%	-	-	-	-	-	-
KETCHIKAN CR 101-47	690	1%	192	0.4%	-	-	52	0.1%	-	-	-	-	41	0.5%
NAKAT INLET 101-11	66	0.1%	-	-	-	-	192	0.3%	-	-	103	0.3%	-	-
NEETS BAY 101-90	267	1%	912	2%	-	-	1,335	2%	-	-	690	2%	-	-
TENT CR 101-25	-	-	-	-	-	-	365	1%	-	-	-	-	-	-
WARD LK 101-47	289	1%	16	0.0%	-	-	16	0.02%	-	-	-	-	17	0.2%
TAMGAS CR	-	-	-	-	145	1%	754	1%	-	-	-	-	-	-
Northern Inside Release Sites														
PORTAGE CR 110-16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASTINEAU CH 111-40	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chatham Area Release Sites														
PORT ARMSTRONG109-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEER LK 109-10	-	-	-	-	-	-	180	0.3%	-	-	-	-	-	-
KASNYKU BAY 112-11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Central Outside Release Site														
BEAR COVE 113-41	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRESCENT BAY 113-41	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHAMROCK BAY 113-32	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BURNETT INLET 106-22	238	0.5%	120	0.3%	-	-	-	-	-	-	146	0.4%	-	-
Central Inside Release Site														
NECK LK 106-30	-	-	145	0.3%	-	-	-	-	-	-	229	1%	-	-
CRYSTAL CR 106-44	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EARL WEST COV 107-40	-	-	-	-	-	-	38	0.1%	-	-	92	0.3%	-	-
Total hatchery contribution	1,603	3%	1,727	4%	570	3%	3,935	6%	0	0%	1,260	4%	58	1%
Total purse seine coho salmon harvest	51,783		42,852		22,054		68,448		3,211		33,246		8,968	

-continued-

Table 10. (page 2 of 2)

	DISTRICT													
	109		110		111		112		113		114		All Districts	
RELEASE SITE	hatchery contribution	% of total coho seine harvest	hatchery contribution	% of total coho seine harvest	hatchery contribution	% of total coho seine harvest	hatchery contribution	% of total coho seine harvest	hatchery contribution	% of total coho seine harvest	hatchery contribution	% of total coho seine harvest	hatchery contribution	% of total coho seine harvest
Southern Outside Release Site														
KLAWOCK R 103-60	71	0.03%	-	-	-	-	-	-	-	-	-	-	1,543	0.2%
Southern Inside Release Sites														
HERRING COVE 101-45	139	0.1%	-	-	-	-	-	-	-	-	-	-	492	0.1%
KETCHIKAN CR 101-47	-	-	-	-	-	-	-	-	-	-	-	-	974	0.1%
NAKAT INLET 101-11	151	0.1%	-	-	-	-	-	-	-	-	-	-	512	0.1%
NEETS BAY 101-90	2,285	1%	-	-	-	-	129	0.1%	-	-	-	-	5,618	1%
TENT CR 101-25	-	-	-	-	-	-	-	-	-	-	-	-	365	0.0%
WARD LK 101-47	-	-	-	-	-	-	-	-	-	-	-	-	337	0.0%
TAMGAS CR	364	0.2%	-	-	-	-	-	-	-	-	-	-	1,263	0.2%
Northern Inside Release Sites														
PORTAGE CR 110-16	72	0.03%	-	-	-	-	68	0.03%	63	0.5%	-	-	203	0.03%
GASTINEAU CH 111-40	243	0.1%	-	-	-	-	2,515	1%	-	-	648	2%	3,407	0%
Chatham Area Release Sites														
PORT ARMSTRONG109-10	1,954	1%	-	-	-	-	165	0.1%	-	-	-	-	2,119	0.3%
DEER LK 109-10	27,367	12%	-	-	-	-	4,556	2%	-	-	-	-	32,102	4%
KASNYKU BAY 112-11	3,985	2%	135	4%	-	-	17,952	9%	471	4%	1,563	5%	24,105	3%
Central Outside Release Site														
BEAR COVE 113-41	3	0.001%	-	-	-	-	3	0.001%	123	1%	-	-	129	0.02%
CRESCENT BAY 113-41	-	-	-	-	-	-	-	-	-	-	-	-	0	0%
SHAMROCK BAY 113-32	30	0.01%	-	-	-	-	-	-	-	-	-	-	30	0.004%
BURNETT INLET 106-22	-	-	-	-	-	-	-	-	-	-	-	-	504	0.1%
Central Inside Release Site														
NECK LK 106-30	-	-	-	-	-	-	-	-	-	-	-	-	374	0.0%
CRYSTAL CR 106-44	279	0.1%	-	-	-	-	16	0.01%	-	-	-	-	295	0.04%
EARL WEST COV 107-40	582	0.3%	-	-	-	-	97	0.0%	-	-	-	-	809	0.1%
Total hatchery contribution	37,525	17%	135	4%	0	0%	25,501	13%	657	5%	2,211	7%	75,183	10%
Total purse seine coho salmon harvest	224,471		3,469		58,843		201,277		12,653		32,987		764,262	

Table 11. Southeast Alaska hatchery contribution, by region of release site, to the Southeast Alaska purse seine fisheries, 1995-1999.

Region of Release Site	YEAR						
	1995	1996	1997	1998	1999	1995-1999 Average	% of SE Ak hatchery contribution
Southern Outside Release Sites (District 103)	123	2,083	383	-	1,543	1,033	1%
Southern Inside Release Sites (District 101 and 102)	42,606	25,930	7,895	24,699	9,563	22,138	28%
Northern Inside Release Sites (District 110, 111, 114 and 115)	115	922	840	1,820	3,610	1,461	2%
Chatham Area Release Sites (District 109 and 112)	65,699	44,858	28,964	65,903	58,326	52,750	67%
Central Outside Release Sites (District 113)	2,444	557	31	876	159	813	1%
Central Inside Release Sites (District 105, 106, 107 and 108)	334	271	245	1,768	1,982	920	1%
Total Hatchery Contribution to Catch:	111,320	74,621	38,358	95,065	75,183	78,910	
Purse Seine Total Coho Harvest:	627,472	447,005	189,054	475,171	422,926	432,326	
Hatchery Contribution to Catch:	18%	17%	20%	20%	18%	19%	

Table 12. Southeast Alaska hatchery contribution, by region of release site, to the Southeast Alaska troll fishery, 1995-1999.

Region of Release Site	YEAR						
	1995	1996	1997	1998	1999	1995-1999 Average	% of SE Ak hatchery contribution
Southern Outside Release Sites (District 103)	715	9,710	2,429	107	9,585	4,509	1%
Southern Inside Release Sites (District 101 and 102)	139,976	200,690	125,251	152,492	161,761	156,034	42%
Northern Inside Release Sites (District 110, 111, 114 and 115)	14,565	25,176	7,592	27,227	39,180	22,748	6%
Chatham Area Release Sites (District 109 and 112)	145,977	190,021	102,587	115,924	255,143	161,930	44%
Central Outside Release Sites (District 113)	19,637	11,263	1,951	14,992	14,239	12,417	3%
Central Inside Release Sites (District 105, 106, 107 and 108)	6,008	8,188	7,261	11,040	20,764	10,652	3%
Total Hatchery Contribution to Catch:	326,878	445,048	247,071	321,783	500,672	368,290	
Troll Total Coho Harvest:	1,750,219	1,906,682	1,170,368	1,636,479	2,275,455	1,747,841	
Hatchery Contribution to Catch:	19%	23%	21%	20%	22%	21%	

Table 13. The percentage of the total Southeast Alaska hatchery harvest of coho salmon in the total troll, drift gillnet, and purse seine commercial coho salmon harvests, by region of release site, 1995-1999.

		Gear Class		
Area	YEAR	Drift Gillnet	Purse Seine	Troll
Southern Inside Release Sites (District 101 and 102)	1995	24%	7%	8%
	1996	22%	6%	11%
	1997	27%	4%	11%
	1998	21%	5%	9%
	1999	26%	2%	7%
Southern Inside Average		24%	5%	9%
Southern Outside Release Sites (District 103)	1995	-	<1%	<1%
	1996	-	<1%	1%
	1997	-	<1%	<1%
	1998	-	-	<1%
	1999	-	<1%	<1%
Southern Outside Average		-	<1%	<1%
Central Outside Release Sites (District 113)	1995	<1%	<1%	1%
	1996	<1%	<1%	1%
	1997	-	<1%	<1%
	1998	<1%	<1%	1%
	1999	<1%	<1%	1%
Central Outside Average		<1%	<1%	1%
Central Inside Release Sites (District 105, 106, 107 and 108)	1995	1%	<1%	<1%
	1996	1%	<1%	<1%
	1997	1%	<1%	1%
	1998	11%	<1%	1%
	1999	6%	<1%	1%
Central Inside Average		4%	<1%	1%
Northern Inside Release Sites (District 110, 111, 114 and 115)	1995	4%	<1%	1%
	1996	3%	<1%	1%
	1997	<1%	<1%	1%
	1998	1%	<1%	2%
	1999	1%	1%	2%
Northern Inside Average		2%	<1%	1%
Chatham Area Release Sites (District 109 and 112)	1995	<1%	10%	8%
	1996	<1%	10%	10%
	1997	<1%	15%	9%
	1998	<1%	14%	7%
	1999	<1%	14%	11%
Chatham Area Average		<1%	13%	9%
1995-1999 Weighted Average:		30%	19%	21%

Table 14. The percent of the 1999 total return of hatchery release site projects harvested, by gear type.

Project (Release Site)	Seine	Gillnet	Troll	Sport	Other[a]	Total Return
Southern Outside Hatchery Projects						
Klawock	5%	0%	32%	11%	52%	29,566
Southern Inside Hatchery Projects						
Nakat Inlet	4%	37%	54%	5%	0%	15,675
Whitman Lake (Herring Cove release site)	2%	28%	56%	6%	8%	29,639
Ward Cr	7%	24%	21%	15%	33%	4,631
Tamgas	0%	37%	29%	3%	30%	102,761
Neets Bay	2%	28%	56%	6%	8%	186,924
Northern Inside Hatchery Projects						
Auke Creek	0%	0%	0%	0%	100%	28
Deer Mountain (Ketchikan Creek release site)	15%	20%	18%	11%	35%	6,583
Gastineau	3%	4%	32%	10%	51%	120,353
Burro Creek (Taiya Inlet release site)	16%	16%	16%	13%	39%	190
Chatham Area Hatchery Projects						
Deer Lake	12%	0%	50%	2%	36%	293,584
Port Armstrong	10%	0%	50%	3%	36%	20,244
Hidden Falls (Kasnyku Bay release site)	10%	0%	40%	1%	49%	251,074
Central Outside Hatchery Projects						
Medvejie Creek (Bear Cove release site)	12%	0%	64%	10%	14%	1,071
Shamrock Bay	0%	0%	77%	21%	2%	16,483
Sheldon Jackson (Crescent Bay release site)	0%	0%	15%	6%	78%	395
Central Inside Hatchery Projects						
Earl West Cove Coop	4%	34%	59%	2%	0%	19,743
Crystal Lake	4%	10%	69%	0%	16%	6,738
Burnett Inlet	6%	49%	12%	2%	32%	9,157
Neck Lake	1%	32%	14%	8%	45%	48,886

[a] Other includes subsistence, broodstock, cost recovery, escapement, jacks, and personal use.

Table 15. Southeast Alaska hatchery contributions and tagged wild coho salmon tag recoveries in the Southeast Alaska drift gillnet fishery by release site, recovery district, and statistical week.

Rearing (hatchery or wild)	Release Site	Recovery District	Statistical Week 26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Total
Southern Inside Release Sites																					
Hatchery	HERRING COVE 101-45	101							20		34	78	90	150	694	1,286	331	353	245	220	3,502
		106					49	35	134		121	84	179	678	1,470	568	518	159	94		4,088
		108										78			352		210				640
Hatchery	KETCHIKAN CR 101-47	101	32	40	6	93	194	51	89	16	9	13									544
		106	136	76	160	132	121	66	14		6					13					724
		108		24			21														45
Hatchery	NAKAT INLET 101-11	101					41	67		104	55	151	306	440	1,444	1,093	455	53		37	4,244
		106								55	56	30	101	348	203	339	153	95	44		1,424
Hatchery	NEETS BAY 101-90	101								52	70	205	452	619	1,132	2,003	1,065	783	362	666	7,410
		106					442	628	445	526	969	1,381	5,015	5,819	14,280	6,874	4,070	2,560	691		43,701
		108										125			501	269					894
Hatchery	TENT CR 101-25	101												94		99	96	149	209		647
		106													169	188	177				534
Hatchery	WARD LK 101-47	101	15	8	11	59	81	51	16	12											254
		106	90	99	130	193	174	88	25		5										804
		108		21			18														39
Wild	UNUK R 101-75	101				3					5		8	5	5	8	2	2			38
		106		2	2	2		5	2	5	5	3	12	22	26	11	5	2			103
Wild	HUGH SMITH LK 101-30	101					5	3	9	13	13	21	40	52	87	80	20	7		11	361
		106							2	10	11	9	7	27	32		5	11	6		120
		108													8						8
Wild	NAHA R 101-90	101										3			4	8	4	2			21
		106				2		3	2	8	18	12	27	40	70	19	13	6	4		224
Hatchery	OLD FRANKS LKS 102-60	106										9	8	17							34
Hatchery	TAMGAS CR	101												666	1,605	2,986	2,523	2,171	5,697	3,322	18,969
		106									44			621	1,823	3,119	1,014	4,124	1,807		12,552
	Southern Inside Release Sites Subtotal		273	268	307	477	1,142	987	743	765	1,371	2,155	6,150	9,451	23,673	18,837	10,611	10,447	9,148	4,245	101,051
	Southern Inside Wild Subtotal (tag recoveries)		0	2	2	8	5	11	15	37	53	47	94	146	233	126	48	28	10	11	876
Northern Inside Release Sites																					
Hatchery	PORTAGE CR 110-16	111												8							8
Hatchery	GASTINEAU CH 111-40	111						16		67	27	33	91	232	52	126	200	112			955
		115										150	979	746	503	593	1,218	315			4,504
Wild	AUKE CR 111-50	111												4	1		4	3			12
		115										1	3		2	9	28	2			46
Wild	DREDGE LK 111-50	115														3	4				7
Wild	TAKU R 111-32	111				4			4	2	6	2	12	19	8	6	29	3			94
		115											3		6	6	11				25
Hatchery	TAIYA INLET 115-34	115													10						10
Wild	BERNERS R 115-20	111												6			4				10
		115										1	37	105	180	248	526	198			1,295
	Northern Inside Release Sites Subtotal		0	0	0	0	0	16	0	67	27	183	1,070	986	565	718	1,417	427	0	0	5,477
	Northern Inside Wild Subtotal (tag recoveries)		0	0	0	4	0	0	4	2	6	4	55	134	197	272	604	207	0	0	1,488
Chatham Area Release Sites																					
Hatchery	DEER LK 109-10	106							99												99
		111								82											82
Hatchery	KASNYKU BAY 112-11	111						69		67				101							237
		115															90				90
	Chatham Area Release Sites Subtotal		0	0	0	0	0	69	99	149	0	0	0	101	0	0	90	0	0	0	508
Central Outside Release Site																					
Hatchery	BEAR COVE 113-41	113														1					1
	Central Outside Release Site Subtotal		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1

-continued-

Table 15. (page 2 of 2)

Rearing (hatchery or wild)	Release Site	Recovery District	Statistical Week 26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Total
Central Inside Release Sites																					
Hatchery	BURNETT INLET 106-22	101	18																		18
		106	290	245	357	612	665	513	257	69	77	25	21	48							3,179
		108	146	240	678		104	79	44												1,291
Hatchery	CRYSTAL CR 106-44	106					17	50	60	15	22		10								174
		108					26	20			295	131			36						508
		111							15			7									22
Hatchery	MITCHELL CR 106-43	106						5	4	16	13	3	5	6	7						58
		111												2							2
Hatchery	NECK LK 106-30	106	2,280	1,275	2,949	1,331	2,467	2,142	488	145			131								13,208
		108			2,133		328														2,461
Hatchery	EARL WEST COVE 107-40	101													31	76	17	16	38		179
		106						25	37		33	137	523	573	824	545	390	224	177		3,489
		108										56			239		245				540
	Central Inside Release Sites Subtotal		2,733	1,761	6,117	1,942	3,606	2,834	906	245	441	359	689	629	1,137	621	653	240	215	0	25,129
	Hatchery Total Contribution		3,006	2,029	6,424	2,419	4,749	3,906	1,748	1,226	1,839	2,696	7,910	11,167	25,375	20,178	12,772	11,114	9,363	4,245	132,167
	Wild Total (tag recoveries)		0	2	2	12	5	11	18	39	58	52	149	280	430	398	653	235	10	11	2,365

Table 16. Southeast Alaska hatchery contributions and tagged wild coho salmon tag recoveries in the Southeast Alaska purse seine fishery by release site, recovery district, and statistical week.

Rearing (hatchery or wild)	Release Site	Recovery District	Statistical Week 28	29	30	31	32	33	34	35	36	Total
Southern Outside Release Site												
Hatchery	KLAWOCK R 103-60	102								164		164
		103								425		425
		104	48	33			57	245	382	117		883
		109								71		71
	Southern Outside Release Site Subtotal		48	33	0	0	57	245	382	777	0	1,543
Southern Inside Release Sites												
Hatchery	HERRING COVE 101-45	101				53						53
		102								179		179
		104						121				121
		109							139			139
Hatchery	KETCHIKAN CR 101-47	101			132	348	34	66	109			690
		102	18	99	26					49		192
		104	7	16			29					52
		107			19	22						41
Hatchery	NAKAT INLET 101-11	101						66				66
		104					85		69	38		192
		106								103		103
		109					151					151
Hatchery	NEETS BAY 101-90	101								267		267
		102							222	691		912
		104		62			158	86	1,029			1,335
		106							325	365		690
		109				304	1,041	368	572			2,285
		112				129						129
Hatchery	TENT CR 101-25	104					148	217				365
Hatchery	WARD LK 101-47	101			65	130	94					289
		102	16									16
		104			7	8						16
		107		17								17
Hatchery	TAMGAS CR	103								145		145
		104					100	102	552			754
		109					178		186			364

-continued-

Table 16. (page 2 of 3)

Rearing (hatchery or wild)	Release Site	Recovery District	Statistical Week 28	29	30	31	32	33	34	35	36	Total
Southern Inside Release Sites (continued)												
Wild	HUGH SMITH LK 101-30	101			7	4	9			26		46
		102							32	14		45
		104				6	24	12	6	4		52
		106								10		10
		109			25		14		3			43
Wild	NAHA R 101-90	101							33			33
		102								29		29
		109				6			7			13
Wild	UNUK R 101-75	101			7	4		6	31	13		61
		104					8		19			28
		106								10		10
		109					7		7			14
	Southern Inside Release Sites Subtotal		41	195	249	994	2,019	1,027	3,202	1,836	0	9,563
	Southern Inside Wild Subtotal (tag recoveries)		0	0	39	20	63	19	138	104	0	382
Northern Inside Release Sites												0
Hatchery	PORTAGE CR 110-16	109				24		49				72
		112		27			41					68
		113					63					63
Hatchery	GASTINEAU CH 111-40	109					137	69	37			243
		112			187	600	627	126	643	332		2,515
		114				648						648
Wild	AUKE CR 111-50	109								5		5
Wild	DUCK CR 111-50	112						2				2
Wild	TAKU R 111-32	109						6		5		11
		112				9	21		3	3		36
Wild	BERNERS R 115-20	109					7		3			10
		112					10		6		2	18
		114									1	1
	Northern Inside Release Sites Subtotal		0	27	187	1,272	869	244	680	332	0	3,610
	Northern Inside Wild Subtotal (tag recoveries)		0	0	0	9	38	8	12	13	3	83

-continued-

Table 16. (page 3 of 3)

Rearing (hatchery or wild)	Release Site	Recovery District	Statistical Week 28	29	30	31	32	33	34	35	36	Total
Chatham Area Release Sites												
Hatchery	DEER LK 109-10	104								180		180
		109			3,795	2,675	9,118	2,152	995	8,632		27,367
		112				919	520	423	1,253	1,439		4,556
Hatchery	PORT ARMSTRONG109-10	109			676	238	482	82		475		1,954
		112							37	128		165
Hatchery	KASNYKU BAY 112-11	109			377	1,031	1,477	652	84	363		3,985
		110						135				135
		112	2,030	253	4,489	4,043	1,251	972	1,631	3,104	180	17,952
		113					471					471
		114				1,482					81	1,563
	Chatham Area Release Sites Subtotal		2,030	253	9,336	10,387	13,319	4,417	4,001	14,322	261	58,326
Central Outside Release Sites												
Hatchery	BEAR COVE 113-41	109							3			3
		112							3			3
		113				3			42	78		123
Hatchery	SHAMROCK BAY 113-32	109								30		30
Wild	FORD ARM LK 113-73	113					6					6
	Central Outside Release Sites Subtotal		0	0	0	3	0	0	48	108	0	159
	Northern Inside Wild Subtotal (tag recoveries)		0	0	0	0	6	0	0	0	0	6
Central Inside Release Sites												
Hatchery	BURNETT INLET 106-22	101				72	166					238
		102								120		120
		106						146				146
Hatchery	CRYSTAL CR 106-44	109			110		62	88	18			279
		112							12	4		16
Hatchery	NECK LK 106-30	102	145									145
		106						229				229
Hatchery	EARL WEST COVE 107-40	104					38					38
		106								92		92
		109			237	57	67		125	96		582
		112					97					97
	Central Inside Release Sites Subtotal		145	0	347	129	431	463	155	312	0	1,982
	Hatchery Total Contribution		2,264	508	10,119	12,784	16,695	6,396	8,470	17,686	261	75,183
	Wild Total (tag recoveries)		0	0	39	29	107	27	149	117	3	471

Table 17. Southeast Alaska hatchery contributions and tagged wild coho salmon tag recoveries in the Southeast Alaska troll fishery by release site, recovery district, and statistical week.

Rearing (hatchery or wild)	Release Site	Recovery District	Statistical Week 25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Total
Southern Outside Release Site																			
Hatchery	KLAWOCK R 103-60	101											31						31
		102				20			22		22								64
		103				63	587	577	776	443	311	92	208		36				3,091
		104				382	317	170	175	238	291	301	124		26				2,024
		105				39	94	268	162	114			117			74			869
		106					26												26
		109					123	41	30	41	30				80				345
		113			42	145	293	89	151		210	54	100			54			1,139
		114		33			56												89
		116				98	42												139
		156																	0
		unknown			36	303	358	148	322	351	73	56		121					1,768
Southern Outside Release Site Subtotal			0	33	78	1,049	1,896	1,292	1,638	1,187	938	504	580	121	142	129	0	0	9,585
Southern Inside Release Sites																			
Hatchery	HERRING COVE 101-45	101		41					122		24	43	128	248	222	248	68	504	1,648
		102						30		109	30				43				213
		103					33	42	33			41	33						183
		104				84	84		142	151	33	131	41		74				740
		105				61	48	61	134		109		77	43	111	43			687
		106														43			43
		107											34						34
		109				38	75	207	197	170	113		92	46	129	46			1,112
		113			52	375	453	415	479	621	544	276	1,367	539	828	539	326	126	6,939
		114			56						52			50		63			221
		116				52	103	220	117	117	168		163	63	63				1,065
		154								52			63						115
		156																	0
		157				52													52
		181								52	65								117
		189																	0
		191																	0
		unknown				248	199	336	130	363	275	241	710	488	541	50		34	3,616

-continued-

Table 17. (page 2 of 10)

Rearing (hatchery or wild)	Release Site	Recovery District	Statistical Week																Total
			25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
Southern Inside Release Sites (continued)																			
Hatchery	KETCHIKAN CR 101-47	101		27	1		79	66	59	13	13		9						267
		102				46		40	7	13	7								112
		103				18	9												27
		104			9	136	82												227
		105				20	13	13	7										53
		109				20	31												51
		113			14	140	70	14											239
		114		8		14	14												36
		116				14													14
		154				28													28
		183																	0
		unknown			9	48	47	28	13	7					14				166
Hatchery	NAKAT INLET 101-11	101							39	59	99	28	222	305	138	222	55	83	1,250
		102				20		20		20	20				28				107
		103					27			27	27	53	27	27					188
		104				27	54	27	82	27	27	80	106						431
		105				20		20	20	20	20		83			28			209
		109					61	61	153	61	31		149		30	30			575
		110						31											31
		113			42	168	294	210	42	336	378	41	367	204	244	244	122	41	2,732
		114											41		41		81		163
		116						168	42		42				81				333
		150						27		27									54
		154				42				84									126
		157				42													42
		181									84								84
		183						42											42
		189																	0
		unknown			27		27	210	394	153	84	67	516	122	313	41	111		2,066
Hatchery	NEETS BAY 101-90	101						39	43	82	120		135	239	285	720	693	2,449	4,804
		102						81	43	86					55	125			389
		103			69	54	241	182	214	166	246	58	302						1,533
		104				126	569	575	309	250	560	290	407	109	223				3,420
		105				139	74	135	429	337	783		1,171	558	337	827	115		4,905
		106									39		71		37	152			298
		109				577	669	2,790	1,386	1,241	1,520		883	746	293	324			10,428
		110							241										241
		113			330	3,590	3,910	3,562	2,843	2,731	6,564	2,282	8,026	3,185	3,141	2,737	1,411	599	44,911
		114	30	48	144	281	183	176		107	213	161	656	313	80	88	142		2,622

-continued-

Table 17. (page 3 of 10)

Rearing (hatchery or wild)	Release Site	Recovery District	Statistical Week 25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Total
Southern Inside Release Sites (continued)																			
Hatchery	NEETS BAY 101-90	116				92	1,149	1,426	790	2,059	375		672	54	1,231				7,848
		154				92				177			161						431
		157				190													190
		181							231	448	535								1,214
		183						65											65
		189											90						90
		191									65								65
		unknown				865	728	1,633	2,477	1,985	1,241	544	4,704	1,604	4,248	206	541	181	20,957
Hatchery	TENT CR 101-25	101																139	139
		104								94			92		92				279
		109						153		153				149					455
		113									146	141	282						569
		116									146								146
		181							146										146
		189																	0
		unknown						210	210	146									566
Hatchery	WARD LK 101-47	101		25		12	19	18	12										86
		102				49		12	6										67
		103			18	17	8												42
		104			9	91	42												142
		105				43	24		6										73
		109				93	35	19											147
		113			36	156	50	14	12										268
		114		16															16
		unknown			30	38	24	14	24										130
Wild	HUGH SMITH LK 101-30	101						2	6	6	13		29	39	21	24	5	3	146
		102						2	2	11	6								20
		103					3	3	3	5	5	8	3						28
		104				3	8	5	10	13	28	13	13		8				99
		105					4	2			4		10	10	3	5			38
		109				9	9	26	26	17	6	6	20	6	6	3			132
		113			16	79	32	44	56	28	36	23	42	19	12	23	12	19	440
		114		2	3		16	4									4		29
		116					8	20	12	4	4		4	4	4				59
		150								3									3
		154				4													4
		189																	0
		unknown					4	34	8	26	26	8	32	4	38	3	4		186

-continued-

Table 17. (page 4 of 10)

Rearing (hatchery or wild)	Release Site	Recovery District	Statistical Week 25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Total
Southern Inside Release Sites (continued)																			
Wild	NAHA R 101-90	101												3		8	5	11	27
		102						4											4
		103			3		3		3				3						11
		104				3			3	5		5	3	3	3				24
		105						2	4	2	8		11	8	6	6			45
		106													3				3
		109				9	6	15	21	18			3	3	6	3			84
		113			8	16	29	29	25	17	66	12	52	12	4	4	4		278
		114					4									4			8
		116				4			8						4				16
		154				8													8
		157				4													4
		181							4		8								12
		189																	0
		191																	0
		unknown				4	4	16	21	8			24	18	18		12		125
Wild	UNUK R 101-75	101					2				4		5	5	10	8		5	40
		102				2		2	4										7
		103			3		3			3									8
		104				3	8	3	5		3			3					23
		105						4	2					3	3	3			13
		106									2		3			3			7
		107											3						3
		109				6	3	6	3	3	6			3					29
		113				28	28	4	8	20	28		38	12	8		8		180
		114												4					4
		116						8		12									20
		154											4						4
		181																	0
		189																	0
		unknown					7	12	30	4			18	16	18	3			107
Hatchery	OLD FRANKS LKS 102-60	101									6								6
		103							8										8
		113					13												13
		unknown								8									8
Hatchery	TAMGAS CR	101											65	501	611	380		1,659	3,216
		102						106	46	158					65	157			533
		103										63	63						125
		104				155			163		146	205	302	80	302				1,352
		105						158		205	251		677			241			1,531

-continued-

Table 17. (page 5 of 10)

Rearing (hatchery or wild)	Release Site	Recovery District	Statistical Week 25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Total
Southern Inside Release Sites (continued)																			
Hatchery	TAMGAS CR	109						144	511	808	184		479	907	70				3,102
		113				99	634	225	730	1,602	2,345	449	1,784	463	1,526	572	680	1,483	12,591
		114					126					353					96		575
		116						337		562			192	231					1,323
		154																	0
		181																	0
		189																	0
		unknown						436	126	324	99	151	340	624	610	65	327	157	3,259
Southern Inside Release Sites Subtotal			30	165	845	8,472	10,303	14,797	13,218	16,212	17,829	5,697	25,779	11,897	16,105	8,189	4,770	7,454	161,761
Southern Inside Wild Subtotal (tag recoveries)			0	2	33	181	177	245	262	204	250	73	318	173	172	98	53	38	2,280
Northern Inside Release Sites																			
Hatchery	PORTAGE CR 110-16	109								12			11		11	34			68
		112													11				11
		113									32	31	15						78
		114										15					15		31
		116							32						15				47
		156																	0
		181								16									16
		189																	0
		unknown								39	16		15						70
Hatchery	GASTINEAU CH 111-40	104				25													25
		105							18										18
		109						29		32	93		136	60	197			28	576
		112													32	91			123
		113			38	438	273	77	516	689	1,125	270	1,769	76	588	202	310	39	6,411
		114		72	74		200	477	363	599	800	741	1,595	1,794	1,079	557	626	863	9,840
		116				83	746	912	886	1,328	847		657	269	575				6,302
		154				39					79		44						161
		156																	0
		157				38													38
		181							116	275	198			39					628
		189											124						124
		191									85								85
		unknown			45	325	273	787	880	2,396	2,695	428	2,862	1,190	2,003	392	119	75	14,470
Wild	AUKE CR 111-50	109						3	3	3									9
		112												3		3			6
		113							4	12	8		15	12	8	4	8	12	81
		114					4	4	8	12	16	19	15	50	8	19	19	19	194

-continued-

Table 17. (page 6 of 10)

Rearing (hatchery or wild)	Release Site	Recovery District	Statistical Week 25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Total
Northern Inside Release Sites (continued)																			
Wild	AUKE CR 111-50	116					4	4	24	8			4		4				47
		154									4								4
		156																	0
		181																	0
		183							4										4
		189																	0
		191									4								4
		unknown						4		12	32		38	12	38				136
Wild	DREDGE LK 111-50	113									4	4	4			4			15
		114								4			8	8			4	12	35
		116							4		8								12
		unknown						4	8	4			8		4		8		35
Wild	DUCK CR 111-50	113														4			4
		114								8									8
		unknown											4		4				8
Wild	TAKU R 111-32	109							3						6				9
		112												3					3
		113			4	4	4		4	8	8		15	4		8	15		74
		114				8	4	4	8	12	8	8	23	27	19	8	4	19	151
		116					24	8	8	12	20		4	15	8				98
		156																	0
		181							4	4	4			8	4				23
		183							4										4
		189										8							8
		unknown				4	4	8	36	24	24	4	54	15	35	4	8		219
Hatchery	TAIYA INLET 115-34	114											19						19
		116											19						19
		unknown									20								20
Wild	BERNERS R 115-20	109											3		3			6	11
		112														6			6
		113			4	20	20	4	16	24	32	15	54	12	27	35	54	12	327
		114		2			4	4	8	16	36	38	38	92	65	69	111	108	593
		116					24	40	24	52	16		38	27	38				259
		154																	0
		156																	0
		181								8	16				4				28
		183								8			4	4					16
		189											15						15
		191																	0
		unknown				8		32	40	60	67	23	135	42	135	12	12	4	568
Northern Inside Release Sites Subtotal			0	72	157	947	1,491	2,283	2,811	5,386	5,989	1,485	7,269	3,427	4,511	1,276	1,070	1,006	39,180
Northern Inside Wild Subtotal (tag recoveries)			0	2	8	44	91	118	208	289	306	119	480	332	408	174	242	190	3,011

-continued-

Table 17. (page 7 of 10)

Rearing (hatchery or wild)	Release Site	Recovery District	Statistical Week 25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Total
Chatham Area Release Sites																			
Hatchery	DEER LK 109-10	103					130												130
		104								130	130				127				386
		105						376	94		94		264						828
		109				1,311	1,311	6,409	7,761	4,370	7,574	569	5,544	4,122	6,579	853	5,544	1,848	53,794
		110						291	874										1,165
		112						146						426	142				714
		113			1,562	4,807	6,209	4,606	4,206	6,209	8,011	1,941	3,493	970	1,164	1,552	776	194	45,701
		114		116	574	601	601	1,001	1,001	401	1,602	776	582	388	194	194	582	194	8,808
		116				401	2,003	1,602	1,402	1,202	401				194				7,204
		154									401								401
		156																	0
		157				200													200
		181							200	200									401
		183						200											200
		189																	0
		unknown				601	3,405	4,206	4,206	3,805	2,403	388	3,105	1,203	776		1,189		25,287
Hatchery	PORT ARMSTRONG 109-10	104									35								35
		105						50											50
		109				117	78	311	350	78	467		266	152	380	38	114	38	2,389
		113			54	321	482	375	375	857	803	207	415	207	156	156	104	52	4,562
		114			54		161		54			52	52		52				423
		116					161		54	107									321
		154				54				54									107
		156																	0
		181								54	54								107
		189																	0
		unknown				54	161	214	321	589	54		571		52		52		2,066
Wild	SLIPPERY CR 109-43	109								6									6
		113				4													4
		unknown								4									4
Wild	SLIPPERY CR 109-43	109								6									6
		113				4													4
		unknown								4									4
Hatchery	KASNYKU BAY 112-11	102						48											48
		104				39													39
		105									63		83						146
		109				74		307	192	118	209		480	1,320	698	185		220	3,800
		110							178										178
		112								43		72		926	1,623	299			2,964

-continued-

Table 17. (page 8 of 10)

Rearing (hatchery or wild)	Release Site	Recovery District	Statistical Week 25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Total
Chatham Area Release Sites (continued)																			
Hatchery	KASNYKU BAY 112-11	113			204	1,283	2,148	2,127	2,251	2,650	4,871	574	3,678	383	722	906	1,200	230	23,226
		114		59	517	287	1,245	1,607	1,409	2,302	1,506	1,304	3,216	2,442	1,412	664	1,351	1,968	21,289
		116				250	1,821	2,547	2,551	3,349	2,076		1,005	156	289				14,044
		154									119								119
		156																	0
		157				119													119
		181								161	204			99	156				620
		183						59		102									161
		189											310						310
		191																	0
		unknown				853	1,012	3,182	4,861	6,105	6,672	475	5,181	2,117	2,027	214	99		32,799
Chatham Area Release Sites Subtotal			0	175	2,964	11,370	20,925	29,666	32,339	32,883	37,747	6,359	28,244	14,913	16,743	5,061	11,011	4,743	255,143
Chatham Area Wild Subtotal (tag recoveries)			0	0	0	8	0	0	0	20	0	0	0	0	0	0	0	0	28
Central Outside Release Sites																			
Hatchery	BEAR COVE 113-41	109													3				3
		113			8	8	4	16	36	56	80	12	58	39	93	19	27	23	480
		114											4		4				8
		116					8	24	4	4			4		4				48
		156																	0
		181																	0
		189											4						4
		191																	0
		unknown						4	24	28	16	4	27	12	27		4		146
Hatchery	CRESCENT BAY 113-41	113			12	35	12	35	69	115	46	34	78	34	56	34	11		570
		116				12	12							11	11				45
		unknown				12		12	35		12		34	11	22				136
Hatchery	SHAMROCK BAY 113-32	109								17	17					33			68
		113			24	189	283	165	495	1,013	1,320	205	1,918	822	776	913	205	274	8,602
		114					24				47	23	23			23	46		185
		116					47	94	236	236	94		68	46	183				1,004
		154									24		23						46
		156																	0
		181							24	94	47				23				188
		183												23					23
		189										23							23
		unknown					71	212	353	377	259	68	776	114	297		46		2,574
Hatchery	WRINKLENECK CR 113-41	113								8	12		16	12	8			8	63
		116							12										12
		181									4								4
		unknown						4					4						8

-continued-

Table 17. (page 9 of 10)

Rearing (hatchery or wild)	Release Site	Recovery District	Statistical Week 25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Total
Central Outside Release Sites (continued)																			
Wild	FORD ARM LK 113-73	113			4	4	52	24	32	12	24	12	38		8	4	8		220
		114		5	3			4	4	4			4	19			4		47
		116					8	4	12	8	8			4					44
		181									4								4
		191									4								4
		unknown				4	16	52	24	36	24	4	31	8	4		4		205
Wild	NAKWASINA R 113-43	105									2								2
		113				4	4	4	8	8	32	4	12	15	4	4	4		102
		114					4				4								8
		116							12		4			4					20
		156																	0
		183																	0
		unknown						8	8	8	4		12		8				47
Central Outside Release Sites Subtotal			0	0	43	254	459	566	1,288	1,949	1,978	369	3,037	1,123	1,507	1,023	339	305	14,239
Central Outside Wild Subtotal (tag recoveries)			0	5	7	12	83	95	99	75	109	19	96	50	23	8	19	0	701
Central Inside Release Sites																			
Hatchery	BURNETT INLET 106-22	101				16													16
		103			22	22	22												67
		104				45			22										67
		105				130	16	49	16										212
		109		7		101	151	25											285
		113				174	35												208
		114			30				35										65
		154																	0
		unknown			22	114	22												159
Hatchery	CRYSTAL CR 106-44	103							11			11							22
		104				11	18				11								40
		105				16	8	15		2	8		26						77
		106									43								43
		109				42	79	62	38	41			25		16			4	307
		113			52	127	74	17	23	35	62	17	17	34	17				475
		114	9			17	35	17		17									96
		116						35	17										52
		154																	0
		156																	0
		189																	0
		unknown				17	20	35	35	17	52		5	17	20				218

-continued-

Table 17. (page 10 of 10)

Rearing (hatchery or wild)	Release Site	Recovery District	Statistical Week 25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Total
Central Inside Release Sites (continued)																			
Hatchery	MITCHELL CR 106-43	104				3		3											5
		105					4		4										8
		109				3	6	6	3	3	4								24
		113				4	8	16	4	4	4		16	4					60
		116						12	4										16
		unknown					3		12	4									19
Hatchery	NECK LK 106-30	102				51			206										258
		103					72		72										143
		104				428		71											499
		105				669	103	52	51										876
		109		23	80	560		79		79	80								903
		113			220	1,428	439	110		110		107	106						2,520
		114		63															63
		154				109													109
		unknown			181	292	604	109			111								1,296
Hatchery	EARL WEST COVE 107-40	101																101	101
		102				18													18
		103				24			50			24	24						122
		104					25	50	24				24						122
		105						71		53	71		350	175	100	100			920
		106														25			25
		109				27	165	193	220	82	303		27	27	80	53			1,178
		113			115	343	342	416	266	419	567	258	622	403	660	477	147	73	5,108
		114			76			37						36				37	187
		116				38	77	226	114	151	151		110		73				941
		154				76							73						149
		181								77	191								267
		183						76			37								113
		189																	0
		unknown				38	38	266	258	458	264		294	134	587		73	25	2,435
Central Inside Release Sites Subtotal			9	94	799	4,945	2,366	2,050	1,486	1,553	1,960	417	1,719	830	1,554	655	219	240	20,896
Hatchery Total Contribution			39	538	4,886	27,038	37,440	50,654	52,780	59,170	66,441	14,830	66,627	32,311	40,562	16,332	17,409	13,747	500,803
Wild Total (tag recoveries)			0	9	48	244	352	458	569	587	665	212	894	555	603	279	315	228	6,020